



# Parts Manual

**Our energy working for you.™**



**Power  
Generation**

## Generator Set

MDL3 (Spec A)

MDL4 (Spec A)

MDL6 (Spec A)

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## SAFETY PRECAUTIONS

The following symbols are used in Onan manuals to alert users to the potentially dangerous conditions relating to maintenance of the equipment and replacement of parts. Please read and observe.

**▲ DANGER** *This symbol warns of immediate hazards which will result in severe personal injury or death.*

**▲ WARNING** *This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.*

**▲ CAUTION** *This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.*

## MODEL IDENTIFICATION

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO., and SERIAL NO. from the Onan nameplate.

For handy reference, insert your nameplate information in the spaces below:

MODEL AND SPEC NO. \_\_\_\_\_

SERIAL NO. \_\_\_\_\_

## PRODUCT SAFETY PRECAUTIONS

### ▲ WARNING

Contact with **USED ENGINE OILS** has been identified by a United States federal agency and some USA state agencies as causing **CANCER** or **REPRODUCTIVE TOXICITY**. When checking or changing engine oils take all necessary precautions not to ingest, breathe the fumes or contact the used oil.

### ▲ WARNING

Contact with **ASBESTOS** has been identified by a United States federal agency and some USA state agencies as causing **CANCER** or **REPRODUCTIVE TOXICITY**. When handling engine gaskets take all necessary precautions not to ingest, breathe or contact the dust from the gaskets! Use adequate ventilation and wear protective gloves, masks and clothing!

### ▲ WARNING

Contact with **BENZINE** and **LEAD**, found in gasoline, fuel additives and solvents has been identified by a United States federal agency and some USA agencies as causing **CANCER** or **REPRODUCTIVE TOXICITY**. When checking, draining or adding gasoline and fuel additives, or using solvents take all necessary precautions not to ingest, breathe the fumes, or contact the liquids. Use adequate ventilation and wear protective gloves, masks and clothing!

## Introduction

This parts manual applies to the standard generator sets as listed below. Parts are arranged in groups of related items and each illustrated part is identified by a reference number corresponding to the same reference number in the parts list. Unless otherwise mentioned in the description, parts are interchangeable between models. All references in the parts description that pertain to specification letter differences for replacement parts are for the model listed on the identification label affixed to the generator set control. Throughout this manual, left (non-accessory) and right (accessory) sides are determined by facing the rear or generator end of the set.

### Generator Set Data Table

MODEL IDENTIFICATION	RATING	MODEL IDENTIFICATION	RATING
10.0 MDL3-**-*/	10,000 WATTS	12.0 MDL3-**-*/	12,000 WATTS
12.5 MDL3-**-*/	12,500 WATTS	15.0 MDL3-**-*/	15,000 WATTS
16.0 MDL4-**-*/	16,000 WATTS	20.0 MDL4-**-*/	20,000 WATTS
25.0 MDL6-**-*/	25,000 WATTS	30.0 MDL6-**-*/	30,000 WATTS

### Electrical Data Table

**VOLTAGE CODES	VOLTS	HERTZ	WIRE	PHASE	NOTES
A (1R)	120	60	2	1	
B (3R)	120/240	60	3	1	
G (4XR)	277/480	60	12		
J (3CR)	120, 240, 120/240	60	4	1	+
M (53B)	110, 220, 110/220	50	4	1	+
P (53CR)	110/220, 115/230, 120/240	50	4	1	+
Z (518R)	110, 115, 220, 110/220, 115/230, 120/240	50	12	1	+
L (18R)	120/208, 120/240, 127/220, 139/240, 240/416, 254/440, 277/480	60	12	3	+
Z (518R)	110/190, 110/220, 115/200, 115/230, 120/208, 120/240, 127/220, 220/380, 230/400, 240/416, 254/440	50	12	3	+

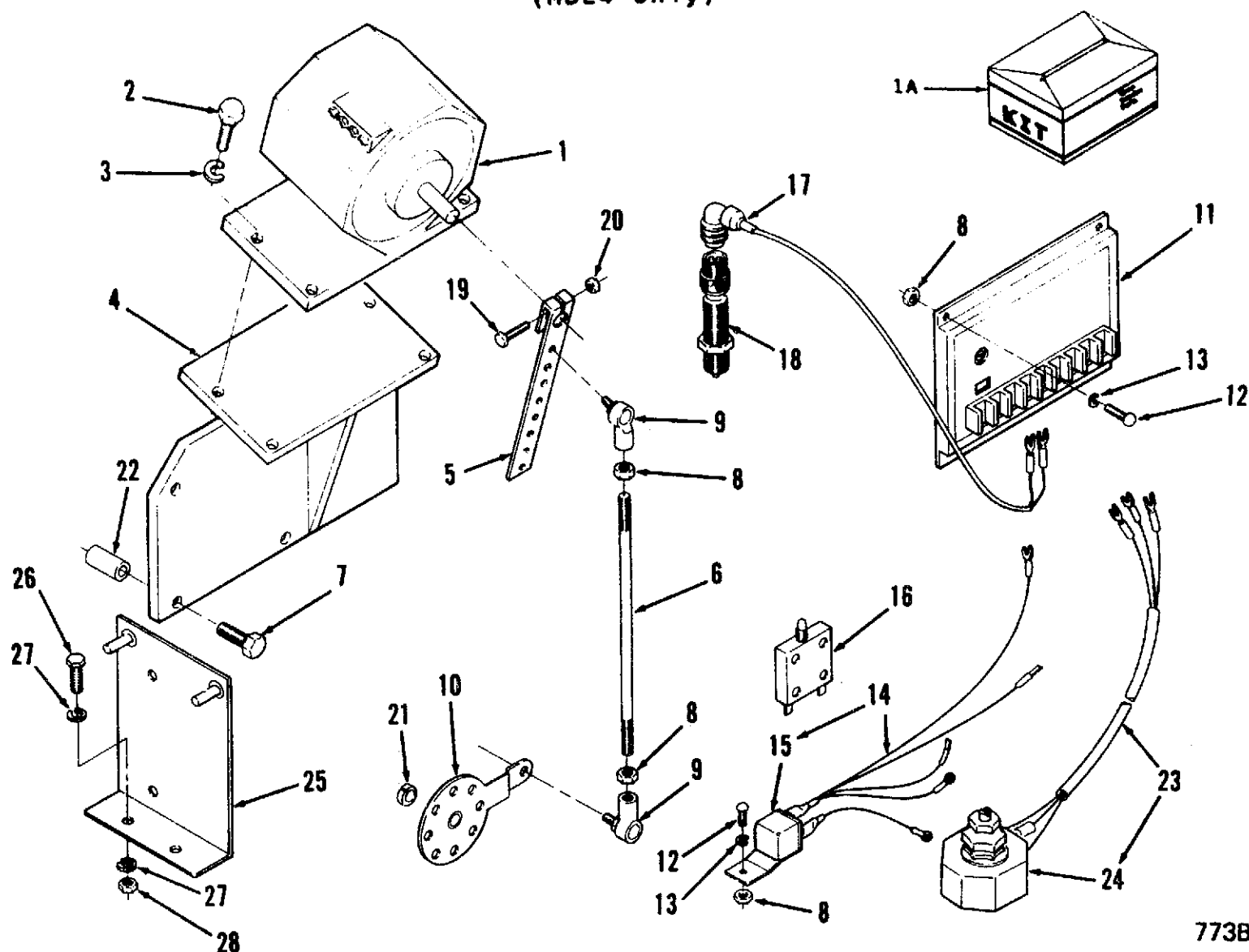
- \* - The diagonal line (/) in the model and specification number separates generator set characteristics from the specification number and letter. The specification number denotes customer requested options or deviations from a standard (1A, 1B, etc.) model. The specification letter advances (A to B, B to C, etc.) with major manufacturing changes.
- \*\* - A letter is now used in the model to indicate the voltage codes and replaces the corresponding number and letter designations (in brackets) as listed in the Electrical Data Table column. (Example: 12.0MDL3-P/ was formerly 12.0MDL3-53CR/) The letter designation change occurred during the later portion of Spec A.
- + - These generators have four load wires which are reconnectable for 120 volt, 2 wire service or 240 volt, 2 wire service or 120/240 volt, 3 wire service.



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**Electronic Governor  
(With Remote Speed Adjustment - 24 Volt DC)  
(MDL4 Only)**

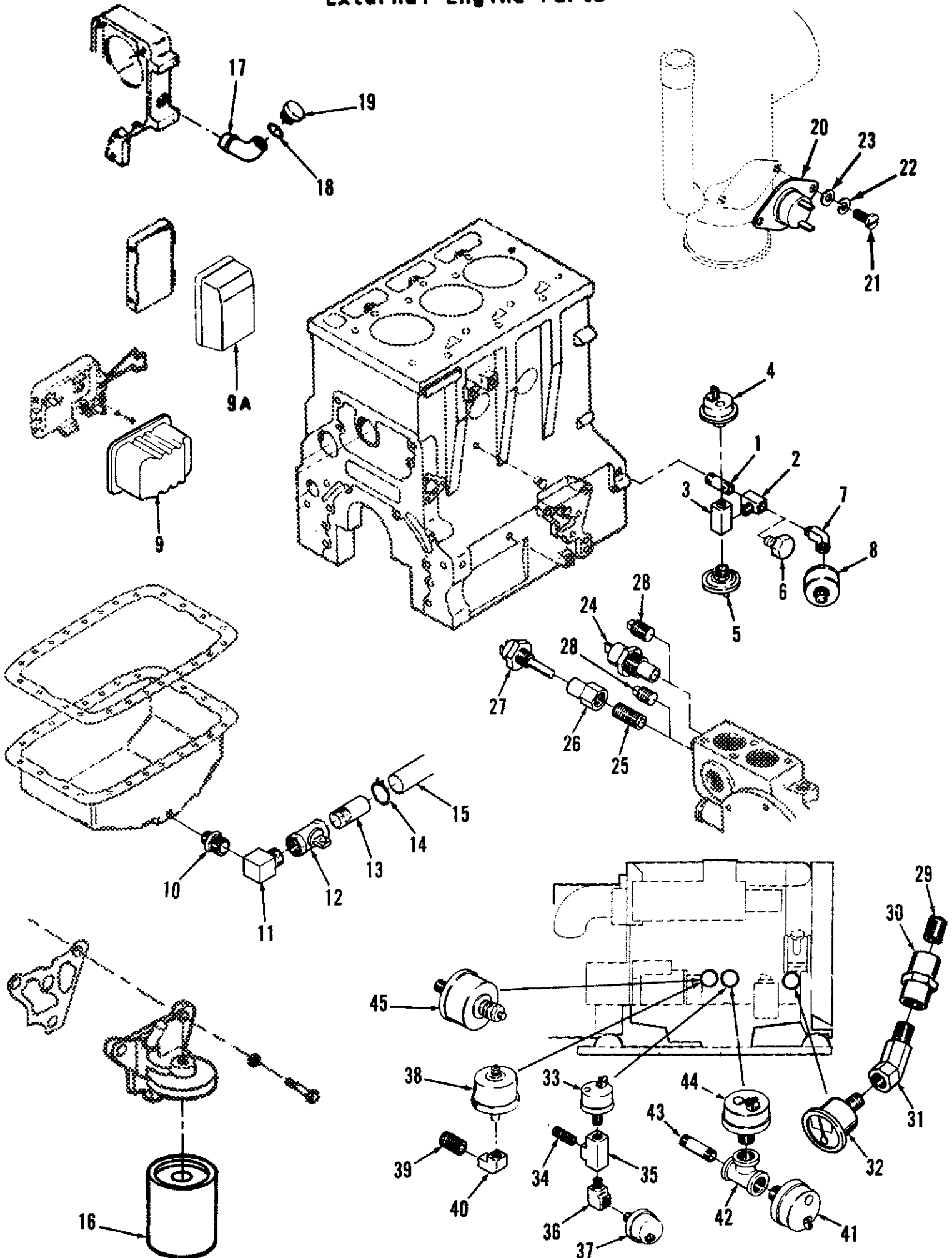


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REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1A	150-2236	1	Kit, Electronic Governor - Field Installation - 24 Volt DC (With Remote Mounted Speed Adjustment) (Includes Parts Marked *)	15	307-2643	1	*Relay (24 Volt DC)
1	151-0639	1	*Actuator, Governor	16	320-0540	1	*Breaker, Circuit - 15 Amp (Includes Mounting Nuts) (C813)
2	800-0006	4	*Screw, Cap - Hex Head (1/4-20 x 7/8")	17	338-1765-04	1	*Cable, Magnetic Pickup (60")
3	850-0040	4	*Washer, Lock - Spring (1/4")	18	151-0603-02	1	*Sensor, Magnetic Speed
4	150-1996	1	*Bracket, Mounting	19	800-0007	1	*Screw, Cap - Hex Head (1/4-20 x 1")
5	151-0567	1	*Arm, Governor (Includes Screw and Nut)	20	870-0065	1	*Nut, Self-Locking (1/4-20)
6	150-1923	1	*Rod, Governor Control	21	147-0779	1	*Sleeve, Throttle Stop
7	800-2071	4	*Screw, Cap - Hex Head (M8 x 90mm)	22	130-1107	2	Spacer
8	870-0131	7	*Nut, Hex - with ET (#10-32)	23	150-2239	1	*Potentiometer Assembly - 24 Volt DC (Remote Mounted) (Includes Resistor, Terminals and Shielded Cable)
9	150-0939	2	*Joint, Ball	24	151-0402	1	*Potentiometer, Speed (Includes Resistor)
10	151-0437	1	*Kit, Throttle Modification (Fuel Injection Pump)	25	150-2281	1	*Bracket, Resistor
11	151-0638	1	*Control, Governor (24 Volt DC) (Includes Jumper) (A12)	26	718-1007	2	*Screw, Cap - Hex Head (M6 x 20mm)
12	813-0100	5	*Screw, Machine - Round Head (#10-32 x 7/16")	27	850-2006	4	*Washer, Lock - Spring (M6)
13	850-0030	5	*Washer, Lock - Spring (#10)	28	750-1004	2	*Nut, Hex (M6)
14	338-2292	1	*Harness, Wiring - Includes Relay				

\* - Parts Included in 150-2236 Electronic Governor Kit

# External Engine Parts

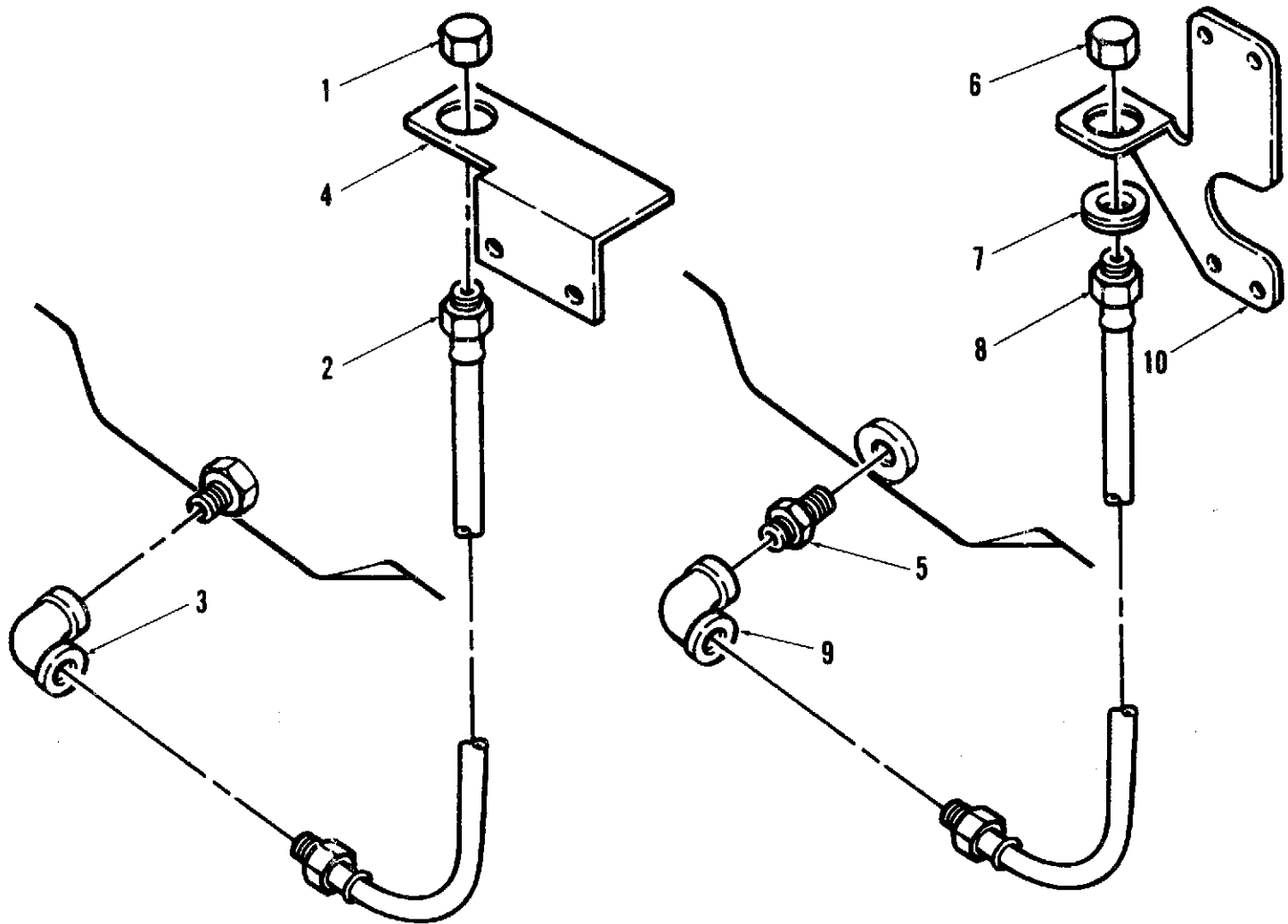


## External Engine Parts

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	505-0104	1	Nipple, Pipe (1/8" x 1 1/2") (MDL3)	23	526-0003	2	#Washer, Flat (#8)
2	505-0057	1	Tee, Branch - Male (MDL3)	24	309-0437	1	@#Switch, Temperature - High Engine Coolant
3	502-0079	1	Tee, Union (MDL3)	25	505-0306	1	@#Nipple, Close (3/8" x 1 1/4")
4	309-0561-01	1	Switch, Pressure - Oil (Closes at 14 Lbs. Descending) (S1)(MDL3)	26	505-0153	1	@#Coupling, Reducer (3/8" to 1/4")
5	309-0104	1	Switch, Pressure - Oil (Closes at 5 Lbs Increasing)(S6)(MDL3)	27	193-0322	1	@#Sender, Coolant Level - Low *Plug, Brass (3/8")
6	502-0028	1	Plug, Hex (1/8")(Sets without Control Gauges)(MDL3)	28	502-0047	1	*Nipple, Close (1/8 x 3/4") (MDL4 and MDL6)
7	502-0053	1	Elbow, Street - 45° (1/8") (Sets with Control Gauges) (MDL3)	29	502-0046	1	*Coupling (1/8")(MDL4 and MDL6)
8	193-0244	1	Sender, Pressure - Oil (Sets with Control Gauges)(E1)(MDL3)	30	502-0051	1	*Elbow, Street - 45° (1/8") (MDL4 and MDL6)
9	149-1758	1	Filter, Fuel (MDL3 and MDL4)	31	502-0053	1	*Gauge, Oil Pressure - Mechanical (MDL4 and MDL6)
9A	149-1802	1	Filter, Fuel (MDL6 Only)	32	193-0367	1	Switch, Oil Pressure (Closes at 14 Lbs Descending) (S1) (MDL4)
10	102-1237	1	#Adapter, Drain - Oil	33	309-0561-01	1	Nipple, Close (1/8" x 3/4") (MDL4)
11	505-0050	1	#Elbow, Street - 90° (1/2")	34	502-0046	1	Tee (1/8")(MDL4)
12	504-0011	1	#Valve, Shutoff	35	502-0079	1	Elbow, Street - 90° (1/8") (MDL4)
13	505-0185	1	#Nipple, Half (1/2")	36	502-0020	1	Switch, Pressure - Oil (Closes at 5 Lbs Increasing)(S6)(MDL4)
14	503-0197	1	#Clamp, Hose	37	309-0104	1	@Sender, Pressure - Oil (E1) (MDL4)
15	503-1195	1	#Hose, Drain - Oil (3/4")	38	193-0244	1	@Nipple, Close (1/8" x 3/4") (MDL4)
16	122-0602	1	MDL3 (Used with Engine Serial Number 53126274 and below)	39	502-0046	1	@Elbow - 90° (1/8")(MDL4)
	122-0764	1	MDL3 (Used when Relief Valve is on Adapter) (Used with Engine Serial Number 53126275 and Up)	40	502-0055	1	Switch, Pressure - Oil (Closes at 14 Lbs. Descending)(S1) (MDL6)
	122-0550	1	MDL4 and MDL6 (Used with Engine Serial Number 53125967 and Below)	41	309-0561-01	1	Tee, Pipe (1/8")(MDL6)
17	123-1558	1	#Tube, Fill - Oil	42	505-0059	1	Nipple, Pipe (1/8 x 3/4") (MDL6)
18	509-0142	1	#Seal, Ring - "O"	43	505-0098	1	Switch, Pressure - Oil (Closes at 5 Lbs. Increasing) (S6) (MDL6)
19	123-1647	1	#Cap, Fill - Oil	44	309-0104	1	@Gauge, Oil Pressure - Mechanical (E1)(MDL6)
20	309-0484	1	#Switch, Exhaust - High Temperature (Sets with Control Gauges)(S3)	45	193-0244	1	
21	822-3041	2	#Screw, Machine - Pan Head (M3 x 5mm)				
22	850-0020	2	#Washer, Lock-Spring (#6)				

# - Parts Used on MDL3, MDL4, and MDL6 Engines.  
 @ - Parts Used on Sets with Control Mounted DC Gauges.  
 \* - Parts Used on Sets without Control Mounted DC Gauges.  
 - - Not Used on all Models.

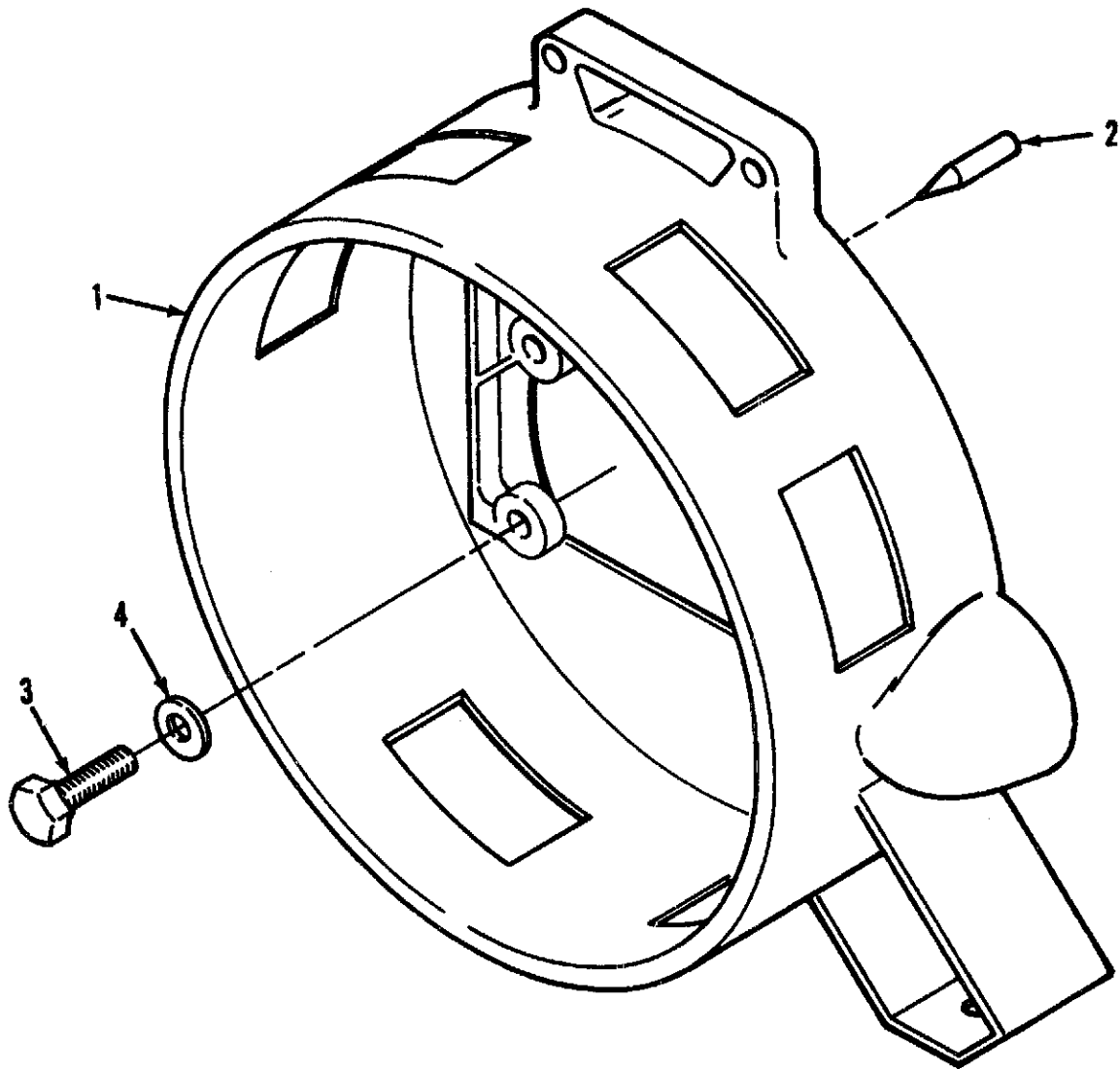
**Oil Drain  
(MDL4 - Spec A Only)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	505-0126	1	Cap, Pipe (3/8-18)
2	501-0462	1	Line, Flexible (3/8-18 Male Both Ends x 22")
3	505-0047	1	Elbow, Pipe - 90° - Reducing (1/2-14 x 3/8-18)
4	102-1198	1	Bracket, Mounting - Oil Drain
5	102-1237	1	Adapter, Pipe (M18 x 1/2-14)

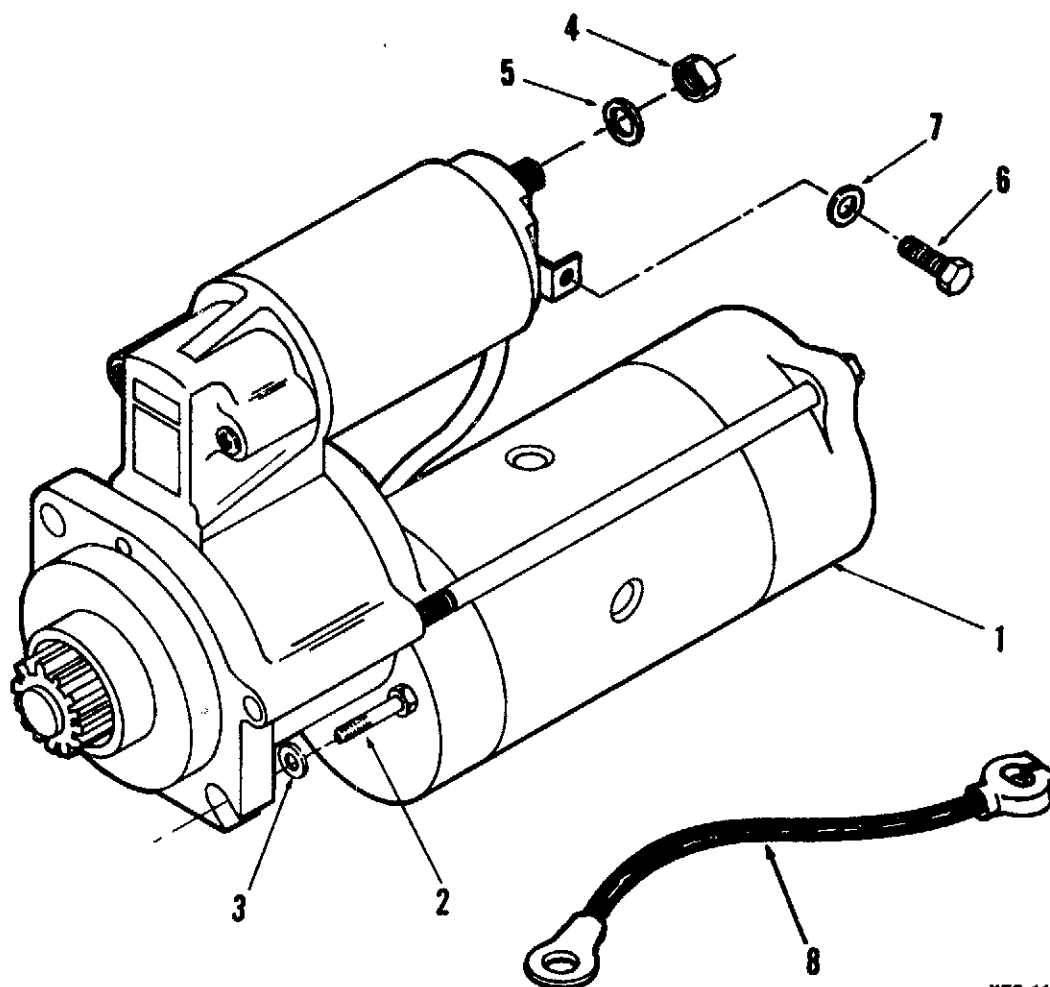
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6	502-0876	1	Cap, Pipe (1/2-14)
7	508-0250	1	Grommet
8	501-0484	1	Line, Flexible (1/2-14 Male Both Ends x 18")
9	502-0908	1	Elbow, Pipe - 90° - Brass (1/2-14)
10	102-1235	1	Bracket, Mounting - Oil Drain

## Generator Adapter



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Adapter Assembly, Generator (Includes Timing Indicator)	2	160-1292	1	Indicator, Timing
	231-0267-01	1	Used on MDL3	3	718-1078	6	Screw, Cap - Hex Head (M12 x 50mm)
	231-0267	1	Used on MDL4 and MDL6 (Without Tapped Magnetic Speed Sensor Mounting Hole)	4	740-1801	6	Washer, Flat (M12)
	231-0289	1	Used on MDL4 (With Tapped Magnetic Speed Sensor Mounting Hole)				

## Starter

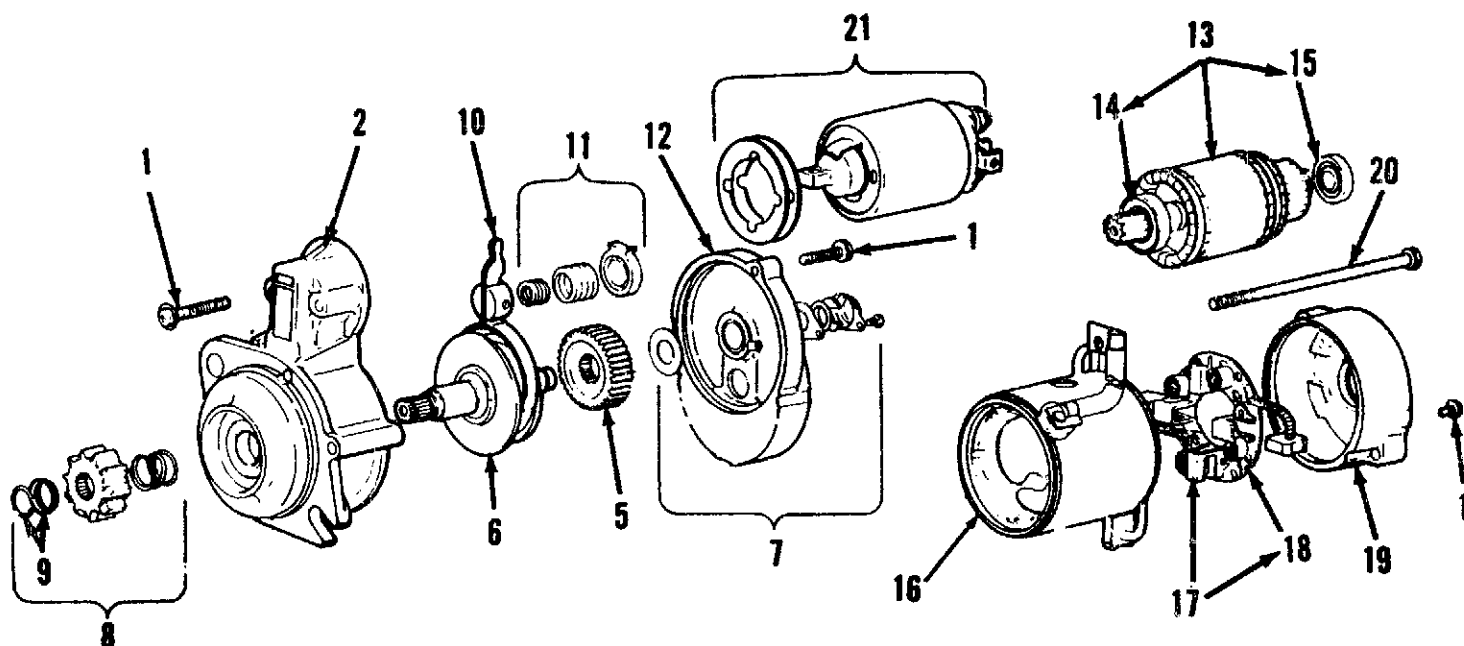


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REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Starter (Includes Switch Terminal Hardware) (See Separate Page for Components)	3		2	Washer, Flat (M12)
	191-1888	1	Used on MDL3, MDL4 and MDL6 (12 Volt DC)(Mitsubishi)		740-1010	2	Mitsubishi
	191-1550	1	Used on MDL3, MDL4 and MDL6 (24 Volt DC)(Mitsubishi)		740-1801	2	Prestolite
	191-1604	1	Used on MDL4 (32 Volt DC) (Prestolite - Not Illustrated) (Note-Starter is labeled 24 Volt but is adequate for 32 Volt systems.)	4	860-2008	1	Nut, Hex (M8) B+ Terminal (Mitsubishi)
				5	850-2008	1	Washer, Lock-Spring (M8) B+ Terminal (Mitsubishi)
				6	718-1002	1	Screw, Cap - Hex Head (M5 x 8mm) Solenoid Terminal (Mitsubishi)
				7	850-2005	1	Washer, Lock - Spring (M5) Solenoid Terminal (Mitsubishi)
2	720-1806	2	Screw, Cap - Flanged Hex Head (M12 x 30mm)	8	336-9474	1	Lead, Ground - 32 Volt DC Starter



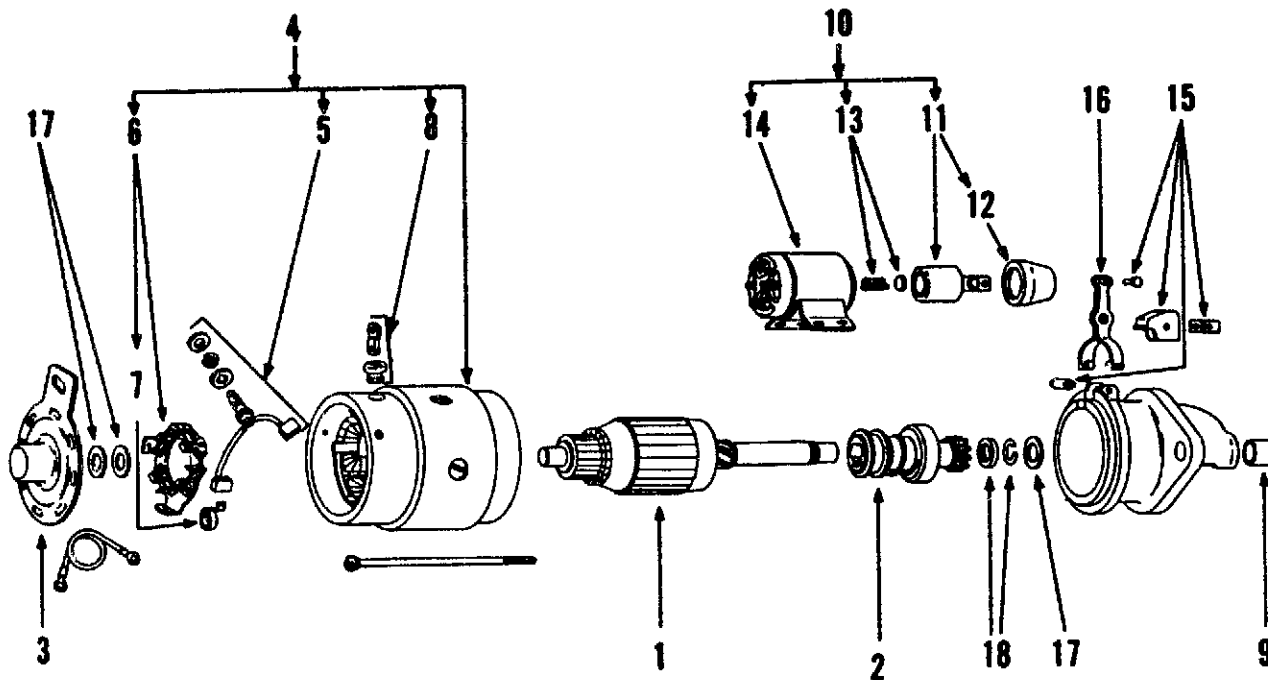
**Starter Components (Mitsubishi)  
(MDL3, MDL4 and MDL6)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	191-1394	1	Starter (Complete)	13			Armature Assembly (Includes Bearings)
	191-1550	1	12 Volt DC		191-1438	1	12 Volt DC
1	191-1450	1	24 Volt DC		191-1606	1	24 Volt DC
2			Screw Set	14	191-1437	1	Bearing, Center
	191-1449	1	Bracket Assembly, Front (Includes Bearing)	15	191-1436	1	Bearing, Rear
	191-1605	1	12 Volt DC	16			Yoke Assembly (Includes Pole Shoes, Field Coil and Positive Brushes)
5	191-1446	1	24 Volt DC		191-1435	1	12 Volt DC
6	191-1445	1	Gear		191-1607	1	24 Volt DC
7	191-1444	1	Clutch	17			Holder, Brush (Includes Negative Brushes)
			Cover Set (Includes Cover, Plate, Washers, Snap Ring and Screws)		191-1434	1	12 Volt DC
8	191-1443	1	Pinion Set (Includes Pinion, Spring and Stopper Set)		191-1608	1	24 Volt DC
9	191-1442	1	Stopper Set (Includes Stopper and Ring)	18	191-1433	4	Spring, Brush
10	191-1441	1	Lever Assembly	19	191-1432	1	Bracket, Rear
11	191-1440	1	Spring Set	20	191-1431	1	Bolt Set
12	191-1439	1	Bracket Assembly, Center	21			Switch Assembly
					191-1430	1	12 Volt DC
					191-1609	1	24 Volt DC



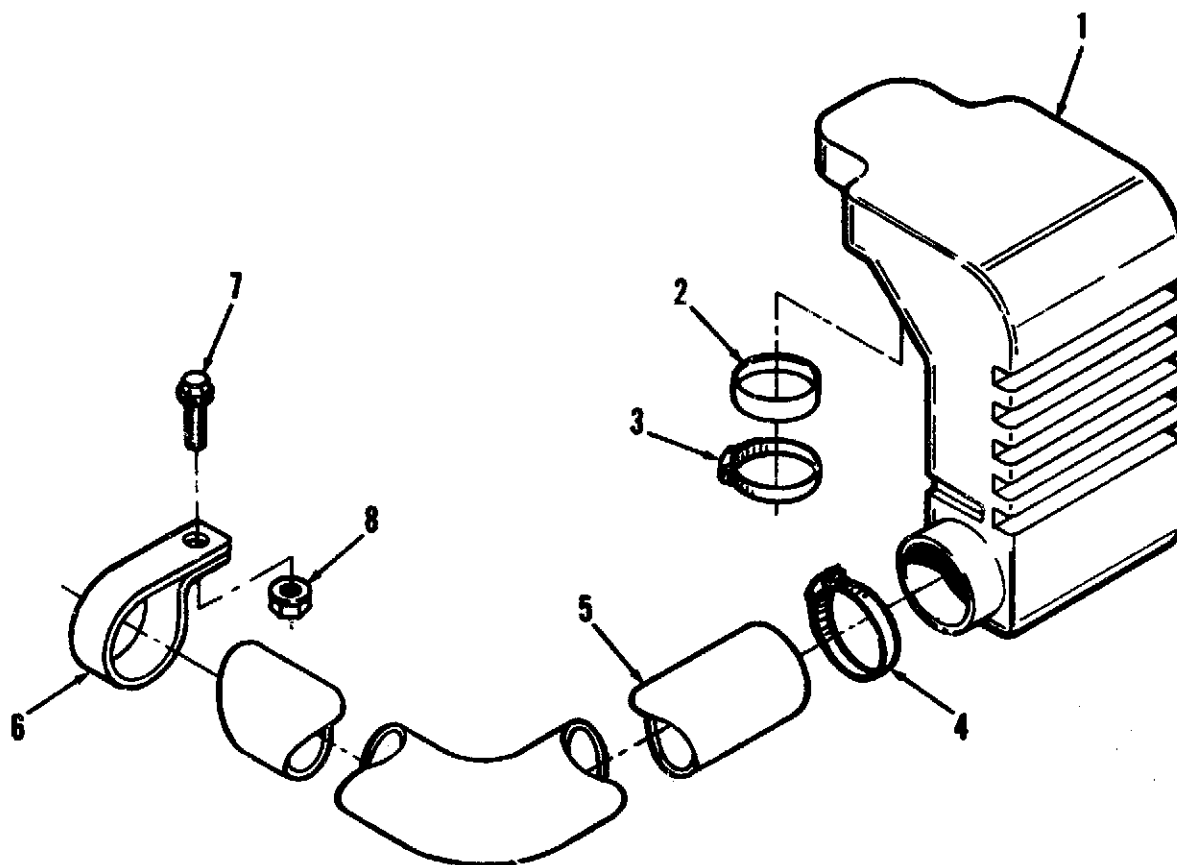
# **Starter Components (Prestolite) (MDL4 Only)**



ES-1407-1

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	191-1604	1	Starter (Complete)	9	191-1130	1	Bearing
1	191-1121	1	Armature	10	191-1194	1	Solenoid Assembly (Includes Moving Core Assembly, Switch and Spring and Plug Package)
2	191-1122	1	Clutch	11	191-1133	1	Core Assembly, Moving (Includes Boot)
3	191-1128	1	Head, Commutator End	12	191-1134	1	Boot, Rubber
4	191-1123	1	Frame and Field Assembly (Includes Brush Set, Brush Plate Assembly and Connector Package)	13	191-1137	1	Spring and Plug Package
5	191-1124	1	Brush Set	14	191-1136	1	Switch, Solenoid
6	191-1125	1	Plate Assembly, Brush (Includes Springs)	15	191-1132	1	Parts Package, Yoke
7	191-1126	1	Spring Set	16	191-1140	1	Yoke
8	191-1127	1	Connector Package	17	191-1139	1	Washer Package, Thrust
				18	191-1135	1	Stop and Lock Ring Package

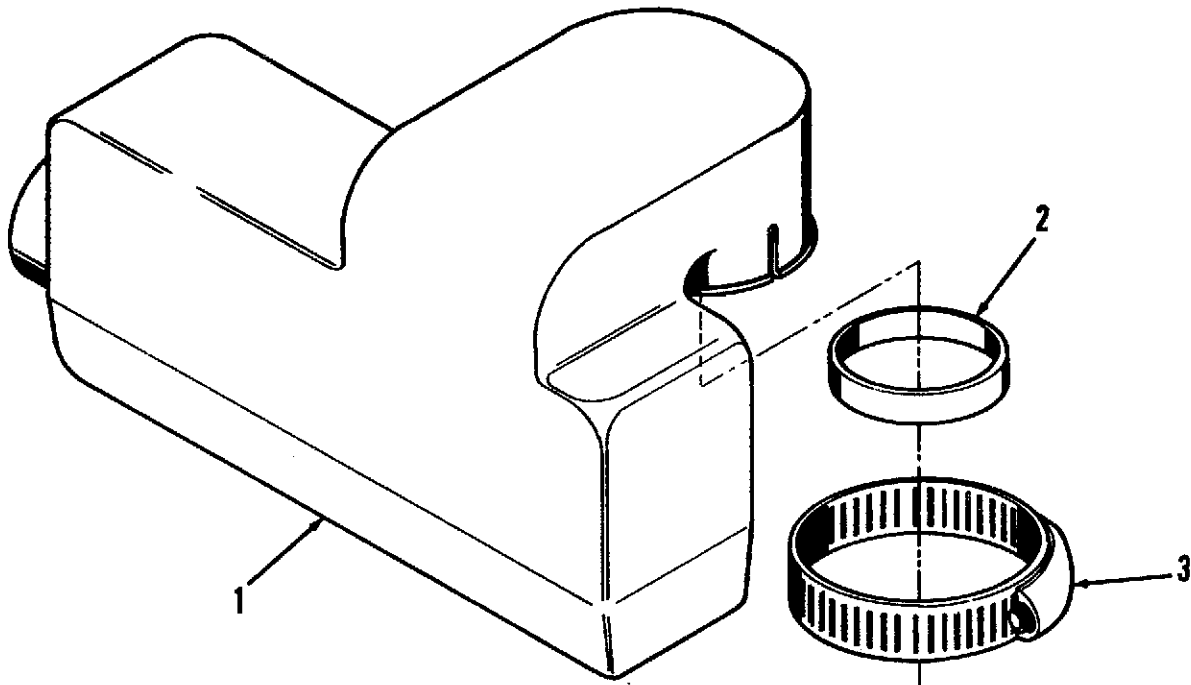
# Air Silencer (MDL3 Only)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-2020	1	Silencer, Intake - Air
2	140-1857	1	Sleeve
3	503-0648	1	Clamp
4	503-1140	1	Clamp, Hose
5	503-1783	1	Hose, Intake - Silencer

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6	503-1774	1	Clamp, Support - "J"
7	821-0016	1	Screw, Self-Locking - Hex Washer Head (5/16-18 x 3/4")
8	870-0257	1	Nut, Self-Locking - Hex Washer Head (5/16)

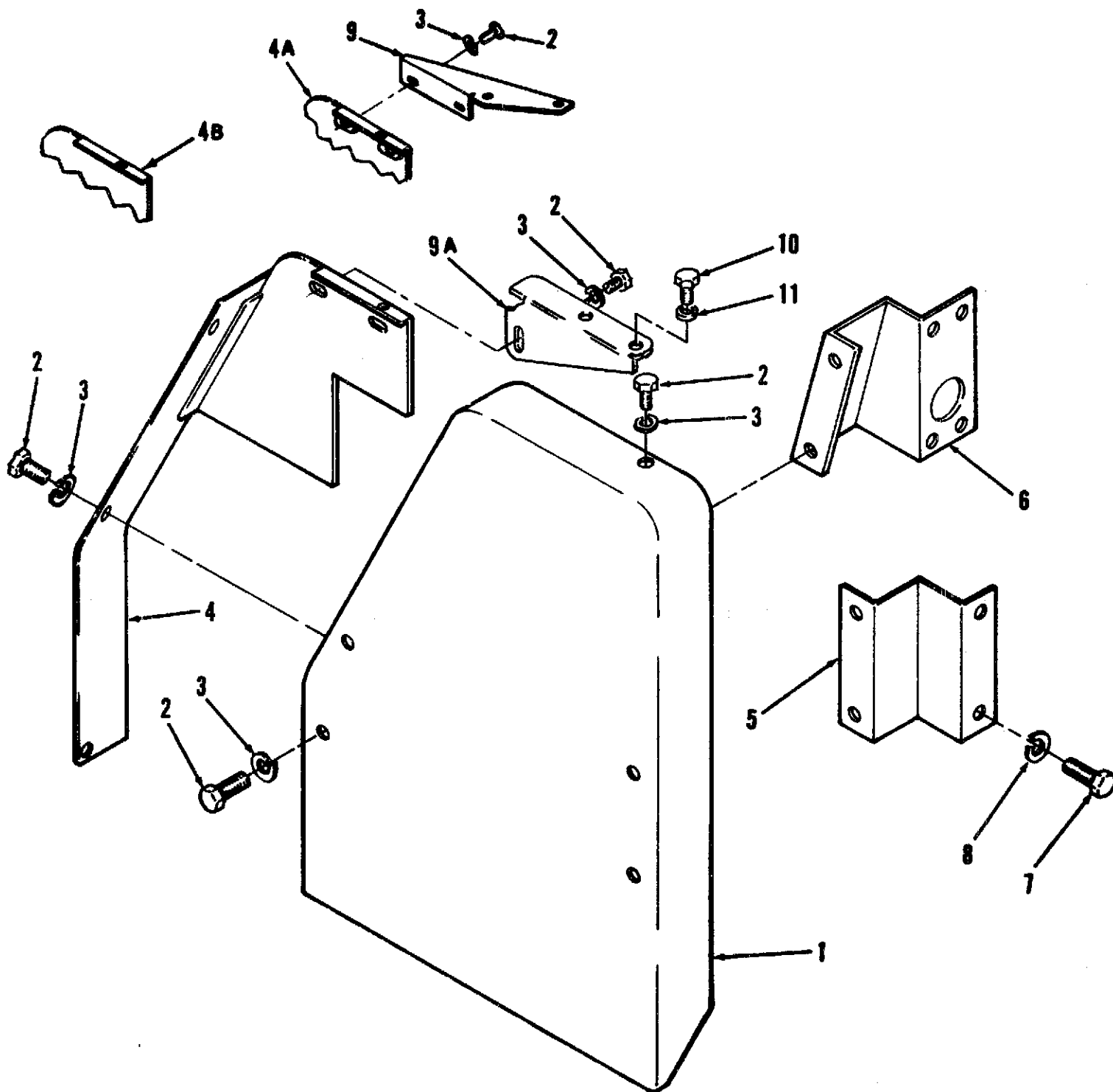
# **Air Silencer (MDL4 and MDL6)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Silencer, Intake - Air
	140-1848	1	Used on MDL4
	140-2110	1	Used on MDL6

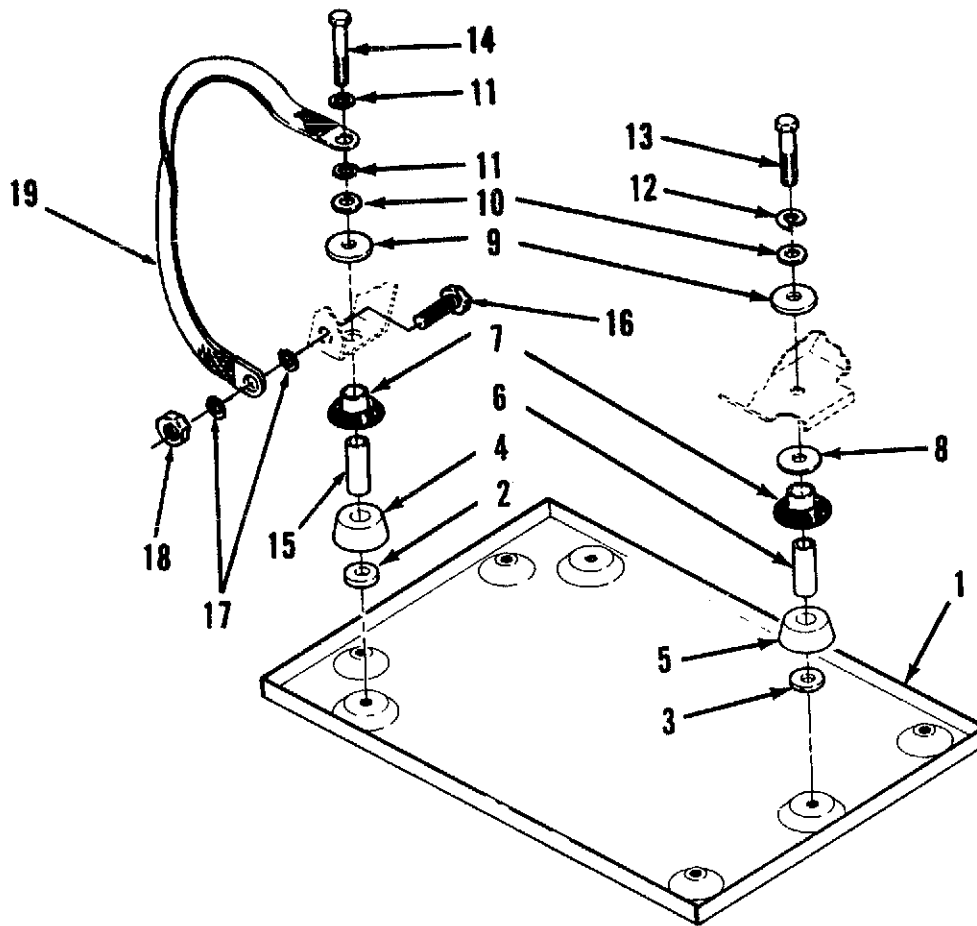
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
2	140-1857	1	Sleeve
3	503-0648	1	Clamp

# Belt Guard



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	130-3008	1	Panel, Front	5	130-2201	1	Bracket, Guard - Pulley (Left hand)
2			Screw, Cap - Hex Head (M6 x 12mm)	6	130-2202	1	Bracket, Guard - Pulley (Right hand)
	800-2029	10	MDL3	7	800-2056	2	Screw, Cap - Hex Head (M8 x 16mm)
	800-2029	8	MDL4	8	850-2008	2	Washer, Lock - Spring (M8)
	800-2029	9	MDL6	9	130-3004	1	Bracket, Guard - Belt (MDL3)
3			Washer, Lock - Spring (M6)	9A	130-3078	1	Bracket, Guard - Belt (MDL6)
	850-2006	10	MDL3	10	718-1046	2	Screw, Cap - Hex Head (M8 x 70mm) (MDL6)
	850-2006	8	MDL4				
	850-2006	9	MDL6	11	526-0115	2	Washer, Flat (5/16") (MDL6)
4	130-3007	1	Panel, Side (MDL6)				
4A	130-3007	1	Panel, Side (MDL3)				
4B	130-3007	1	Panel, Side (MDL4)				

# **Drip Pan and Mounting Cushions (MDL3 Only)**



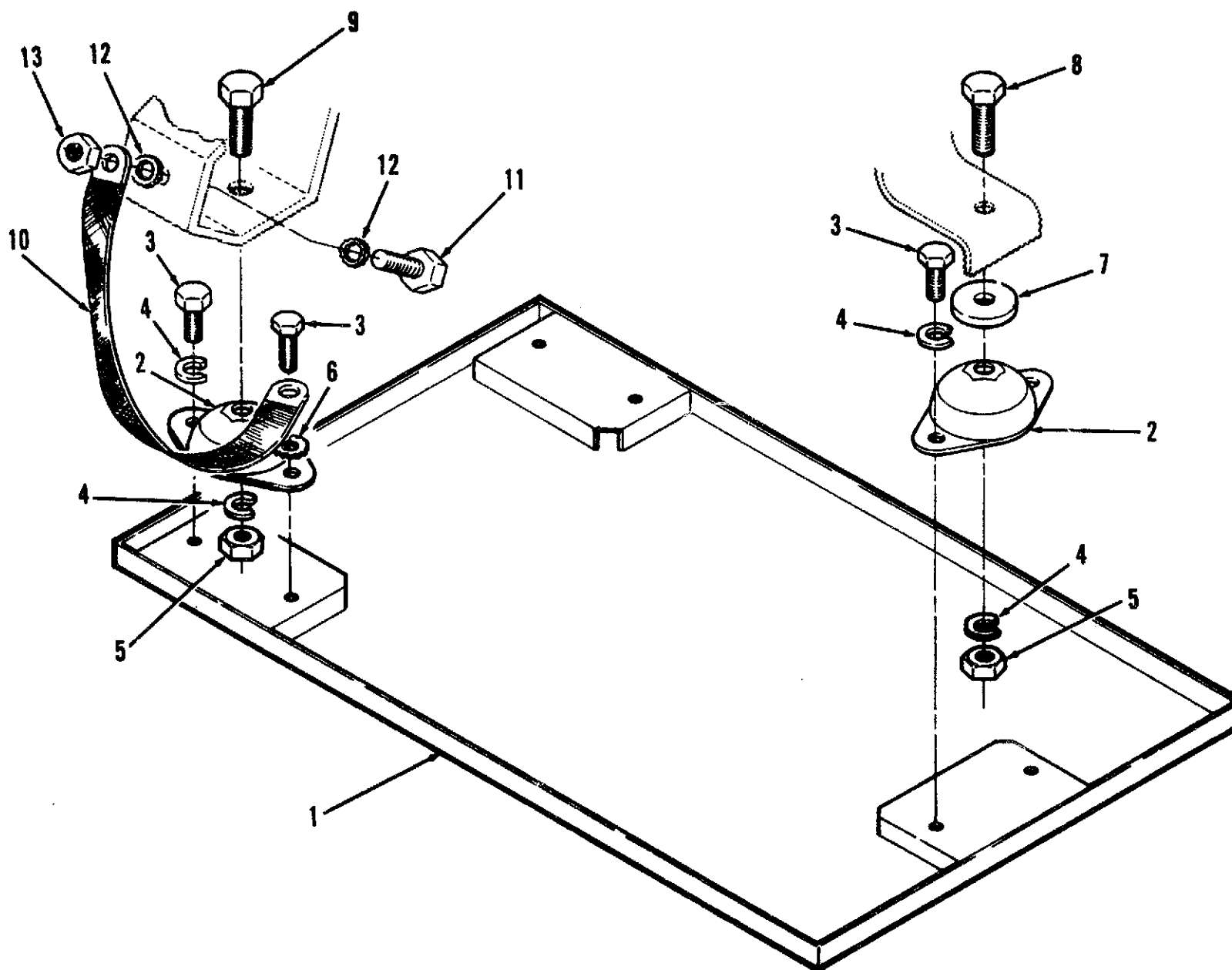
776A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	403-2450	1	Pan, Drip
2	526-0128	1	Washer, Flat (15/64" ID x 1-1/2" OD x 1/4" Thk)
3	402-0503	1	*Spacer (Prior to 4/1/87)
4	402-0287	2	Cushion, Mounting (Rear)
5	402-0285	1	Cushion, Mounting (Front)
6	402-0290	1	Bushing (Front)
7			+Cup, Retaining
	402-0584	3	Prior to 4/1/87
	402-0584	2	Begin 4/1/87
8	526-0286	1	Washer, Flat (1-1/8" ID x 1-3/4" OD x 3/16" Thk)
9	402-0282	3	Cushion, Mounting
10	526-0014	3	Washer, Flat (7/16")
11			Washer (Rear Mounts)
	856-0012	2	Lock - EIT (7/16") Ground Strap Side (Right Hand)
	850-0055	1	Lock - Spring (7/16")
12	850-0055	1	Washer, Lock - Spring (7/16")
13	800-0082	1	*Screw, Cap - Hex Head (7/16-14 x 3-3/4") (Prior to 4/1/87)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
14			#Screw, Cap - Hex Head 7/16-14 x 3-1/4" Prior to 4/1/87 Begin 4/1/87
	800-0080	2	
	800-0080	3	
	800-0081	3	7/16-14 x 3-1/2" - Begin 10/10/88
15	370-4028	2	Bushing (Rear)
16	800-2059	1	Screw, Cap - Hex Head (M8 x 30mm)
17	856-1008	2	Washer, Lock - EIT (5/16")
18	860-2008	1	Nut, Hex (M8)
19	337-1837	1	Strap, Ground - Engine

# - Qty. 3 used begin 1987 during Spec A; with new style drip pan.  
 \* - Not used with new style pan - begin 1987 during Spec A.  
 + - Qty. 2 required with new pan - begin 1987 during Spec A.

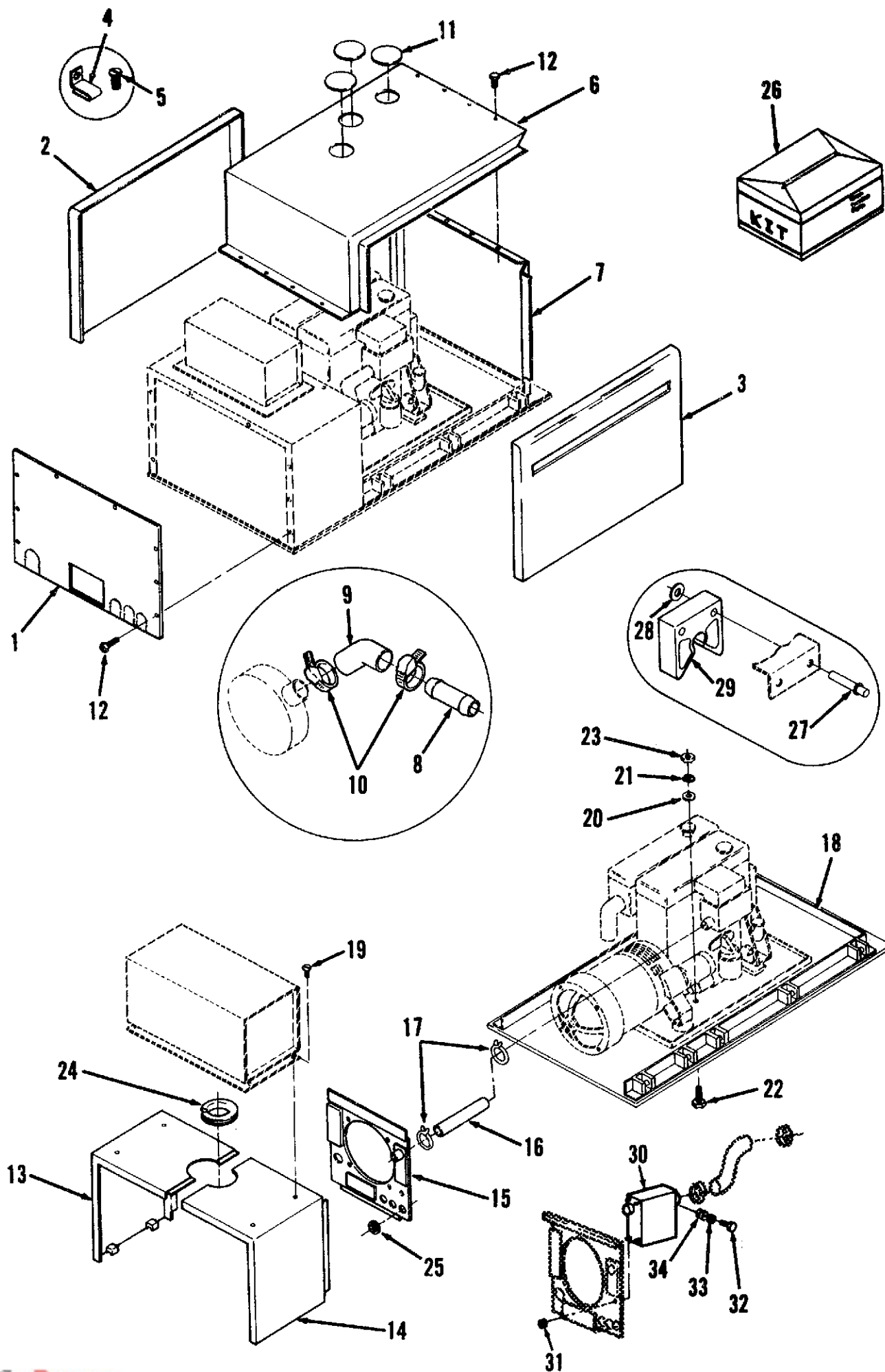
# **Drip Pan and Mounting Cushions (MDL4 and MDL6)**



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	403-2125	1	Pan, Drip
	403-2540	1	Used on MDL4
2	402-0466	3	Cushion, Mounting
3	718-1072	6	Screw, Cap - Hex Head (M12 x 20mm)
4	850-2012	8	Washer, Lock - Spring (M12)
5	750-1010	3	Nut, Hex (M12)
6	853-2012	1	Washer, Lock - ET (M12)
7	402-0503	1	Ground Strap Mounting Spacer

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	718-1076	1	Screw, Cap - Hex Head (M12 x 40mm)
9	718-1074	2	Screw, Cap - Hex Head (M12 x 30mm)
10	337-1837	1	Strap, Ground - Engine
11	800-2059	1	Screw, Cap - Hex Head (M8 x 30mm)
12	856-1008	2	Washer, Lock - EIT (5/16")
13	860-2008	1	Nut, Hex (M8)

# Sound Shield Housing

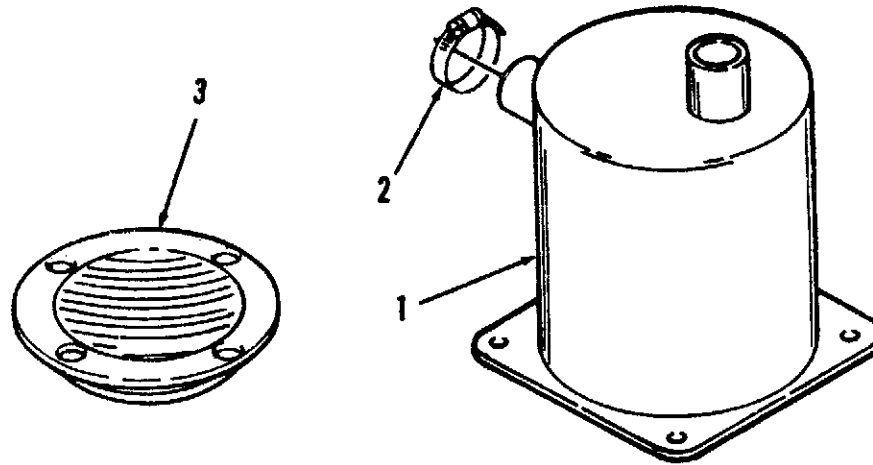


## Sound Shield Housing

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			#Panel, Rear	17	503-0354	2	Clamp, Hose
	405-3155	1	MDL3 and MDL4	18			Base (Includes Plywood Rails, Screws, Pins and Push Nuts)
	405-3758	1	MDL6		405-3595	1	MDL3
2			#Door, Hand - Left		405-3249	1	MDL4
	405-3588	1	MDL3		405-3743	1	MDL6
	405-3130	1	MDL4	19	821-0008	4	Screw, Locking Head - Flange (1/4-20 x 5/16")
	405-3748	1	MDL6				Washer, Flat (1/2")
3			#Door, Hand - Right	20	526-0322	4	Washer, Lock - EIT (1/2")
	405-3586	1	MDL3	21	856-0013	4	Bolt, Carriage
	405-3131	1	MDL4	22			MDL3 and MDL6 (1/2-13 x 2 1/2")
	405-3765	1	MDL6		816-0250	4	MDL4 (1/2-13 x 2")
4			Nut, Speed	23	862-0016	4	Nut, Hex (1/2-13)
	870-0261	6	MDL3 and MDL4	24			Edging
	870-0261	9	MDL6		508-1026	1	MDL3 and MDL4
5			Screw, Pan Head - Cross Recessed (#10 x 5/16")		508-1042-05	1	MDL6
	815-0562	6	MDL3 and MDL4	25	508-0055	6	Grommet
	815-0562	9	MDL6	26			Kit, Sound Shield - Field Installation
6			#Roof		405-3566	1	MDL3
	405-3589	1	MDL3		405-3258	1	MDL4
	405-3174	1	MDL4		405-3763	1	MDL6
	405-3764	1	MDL6	27			Rivet
7			#Panel, Front		818-0150	18	MDL3
	405-3138	1	MDL3 and MDL4		818-0150	26	MDL4 and MDL6
	405-3766	1	MDL6	28			Washer, Flat
8			Union, Hose		526-0003	18	MDL3 (#8)
	502-0874	1	MDL3 and MDL4		526-0003	26	MDL4 and MDL6 (11/64"ID x 3/8"OD x 1/32"Thk)
	502-1016	1	MDL6	29			Clip, Door - Plastic
9			Hose, Water		405-1872	11	MDL3
	503-1258	1	MDL3 and MDL4		405-1872	13	MDL4 and MDL6
	503-1519	1	MDL6	30	140-1879	1	Resonator, Intake - Air (MDL4 Only)
10			Clamp, Hose	31	870-0212	4	Nut, Self-Locking - Flange (1/4-20)(MDL4 Only)
	503-0189	2	MDL3 and MDL4	32	800-2034	1	Screw, Cap - Hex Head (M6 x 20mm) Three Phase Sets (MDL4 Only)
	503-0107	2	MDL6	33	850-2006	1	Washer, Lock - Spring (M6) Three Phase Sets (MDL4 Only)
11			Cover Assembly, Access (Includes Insulation, Speed Nuts and Screws)	34	526-0021	4	Washer, Flat (1/4") Three Phase Sets (MDL4 Only)
	405-3292	2	MDL3 and MDL4	# - These parts include (where required) insulation, bottom edge seals, edging, door catches, door strikes, door clips and retainer nuts.			
	405-3292	3	MDL6				
12	815-0573	16	Screw, Hex Washer Head - Slotted (1/4-20 x 3/4")				
13			#Panel, Generator - Left Hand				
	405-3140	1	MDL3 and MDL4				
	405-3745	1	MDL6				
14			#Panel, Generator - Right Hand				
	405-3141	1	MDL3 and MDL4				
	405-3744	1	MDL6				
15			#Baffle				
	405-3801	1	MDL3				
	405-3149	1	MDL4				
	405-3762	1	MDL6				
16			Hose, Inlet - Air				
	503-1226	1	MDL4 (Single Phase Sets)				
	503-1339	1	MDL4 (Three Phase Sets)				
	140-2146	1	MDL6				



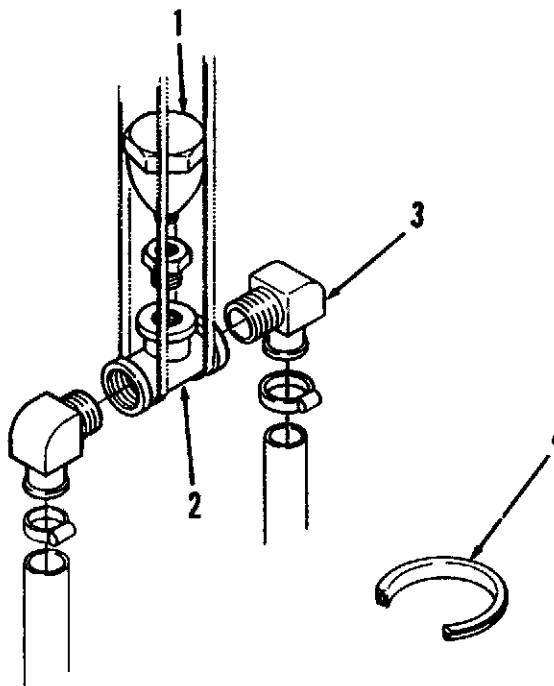
## Muffler Kit



616A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
155-2017		1	Kit, Muffler (Includes Parts Listed Below) (2-1/2" Inlet and Outlet)	1	155-2010	1	Muffler
				2	503-0354	8	Clamp
				3	155-1002	1	Strainer

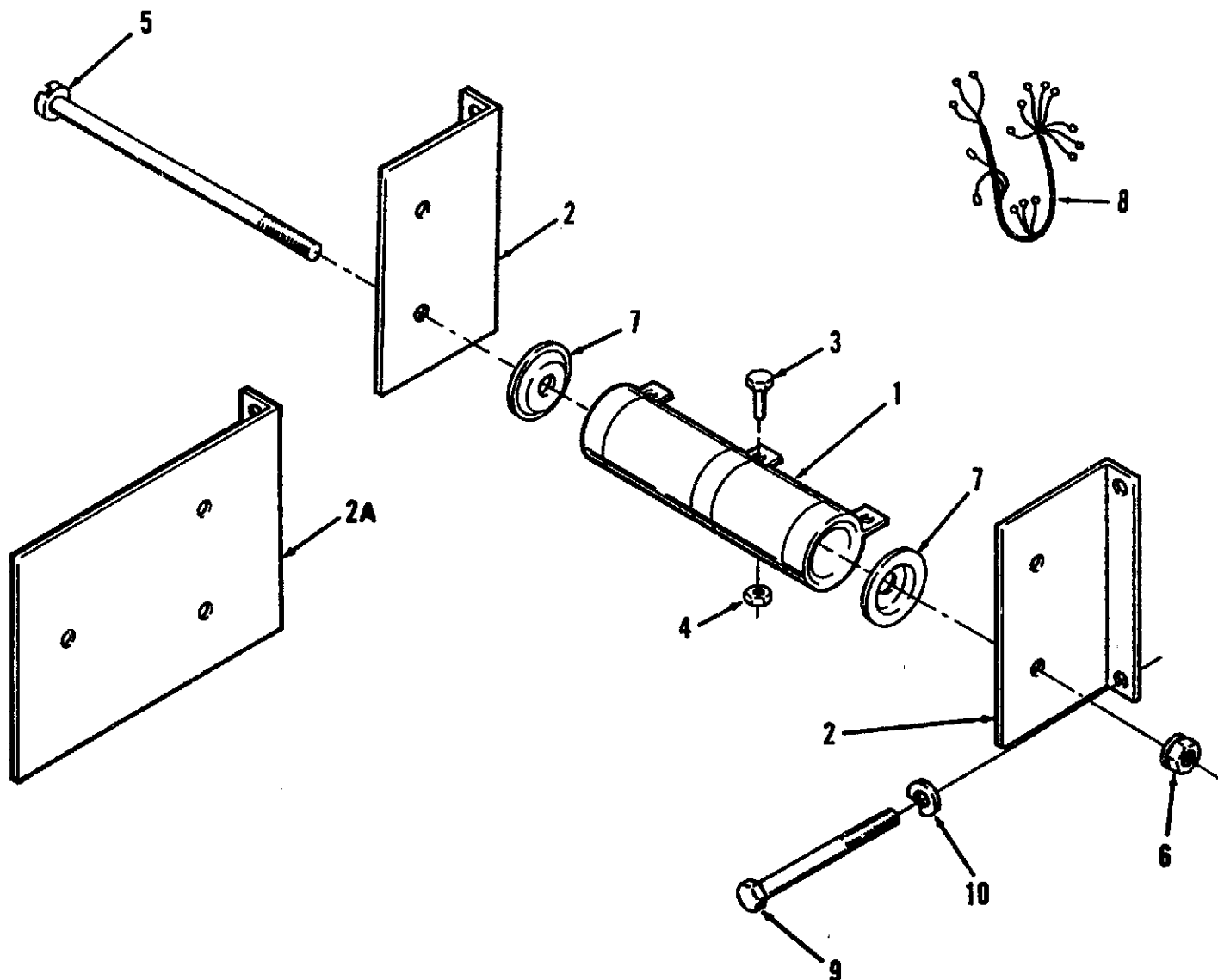
## Siphon Break Kit



764A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
155-2014		1	Kit, Siphon Break (Includes Parts Listed Below)	3	502-0881	2	Elbow, Male - 90° (Special)
1	504-0062	1	Valve, Vacuum Relief	4	508-1039	1	Edging (Knockouts)
2	502-0883	1	Tee, Pipe - Brass (3/4" x 3/4" x 1/2")				

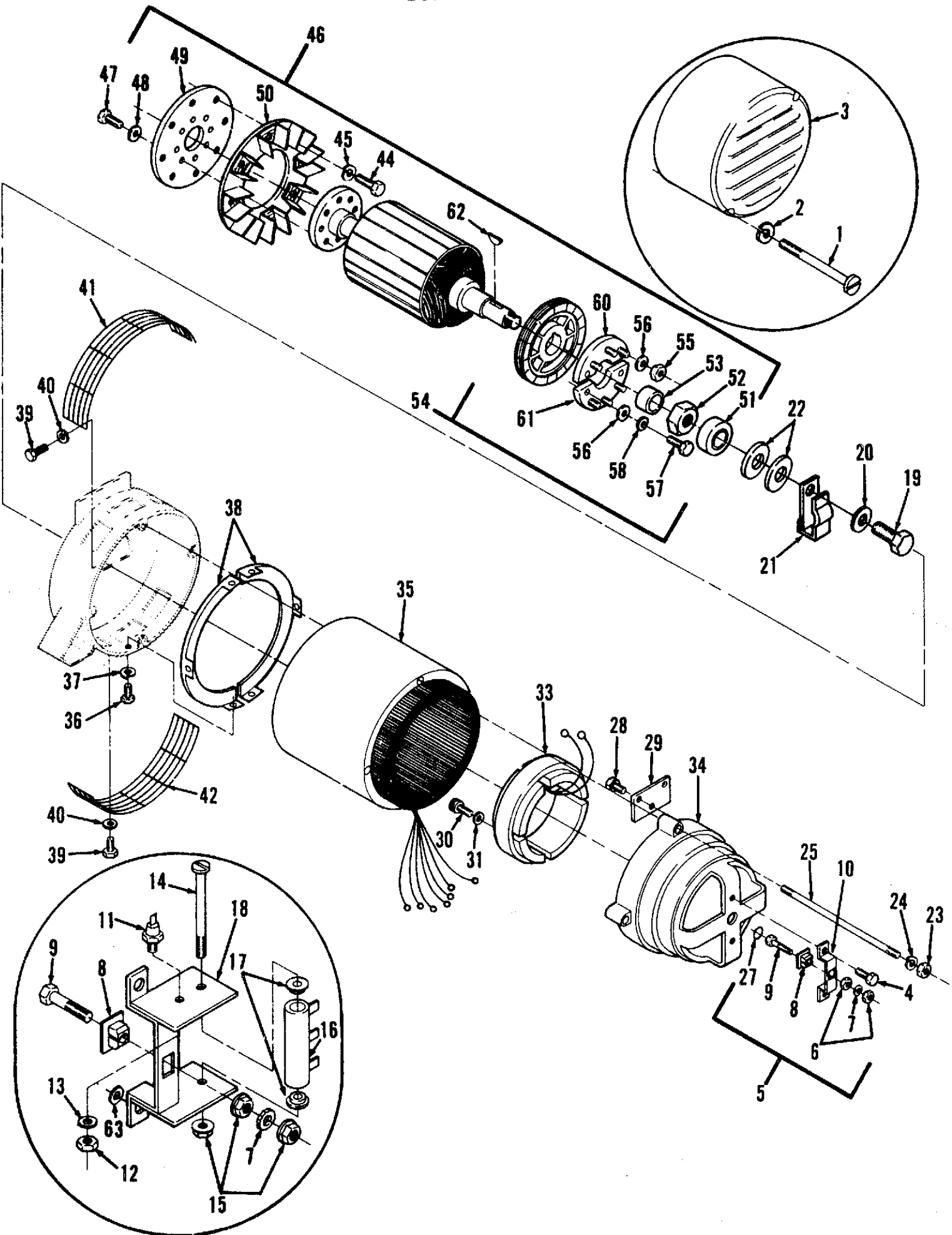
# **Ballast Resistor** (Glow Plugs - 24 and 32 Volt DC)



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Resistor, Fixed-Glow Plugs (RN1)
	304-0651	2	MDL3 and MDL4 (24 Volt DC)
	304-0651	3	MDL6 (24 Volt DC)
	304-0648	2	MDL4 (32 Volt DC)
2	150-1942	2	Bracket, Mounting (MDL34 and MDL4)
2A	150-2170	2	Bracket, Mounting (MDL6)
3			Screw, Self-Locking (#10-32 x 5/16")
	821-0004	6	MDL3 and MDL4
	821-0004	9	MDL6
4			Nut, Self-Locking (#10-32)
	870-0131	6	MDL3 and MDL4
	870-0131	9	MDL6
5			Screw, Machine - Round Head (1/4-20 x 5")
	812-0166	2	MDL3 and MDL4
	812-0166	3	MDL6

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6			Nut, Self-Locking (1/4-20)
	870-0212	2	MDL3 and MDL4
	870-0212	3	MDL6
7			Washer, Centering
	304-0006	4	MDL3 and MDL4
	304-0006	6	MDL6
8			Package, Wiring (Resistor Leads)
	338-2246	1	MDL3
	338-1680	1	MDL4
	338-2042	1	MDL6
9	718-1017	4	Screw, Cap - Hex Head (M6 x 10mm)
10	850-2006	4	Washer, Lock-Spring (M6)

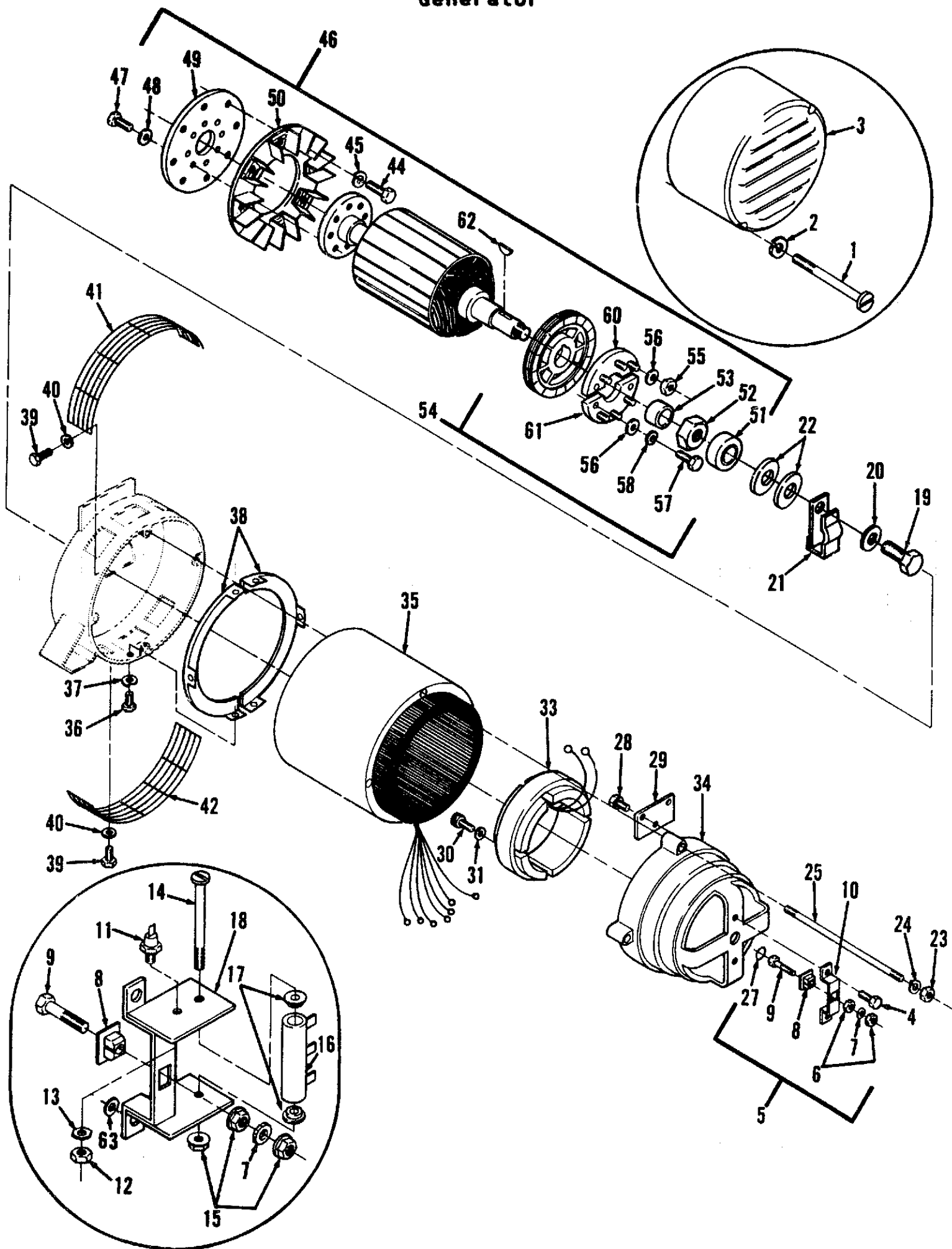
# Generator



# Generator

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0167	2	Screw, Machine - Round Head (1/4-20 x 6")	34	211-0256	1	Bell, End
2	850-0040	2	Washer, Lock - Spring (1/4")	35			Stator, Generator
3	234-0498	1	Cover, End Bell		220-2026	1	MDL3
4	821-0018	2	Screw, Self-Locking - Hex Washer Head (1/4-20 x 5/8")				10.0MDL3 - 50 Hertz - Code P, 53CR - 12 Volt DC
5	150-1446	1	Bracket and Point Assembly (32 Volt DC Sets) (Includes Parts Marked @)				12.0MDL3
6	862-0001	2	@Nut, Hex (1/4-20) 32 Volt DC Sets		220-2026	1	50 Hertz
7	853-0013	1	#@Washer, Lock - ET (1/4")		220-2208	1	Code P, 53CR
8	870-0250	1	#@Nut, Insulating				12 Volt DC
9	150-0723	1	#@Point, Contact		220-3874	1	24 Volt DC
10	150-1445	1	@Bracket, Mounting - Point Assembly (32 Volt DC Sets)		220-3800	1	Code Z, 518R
11	358-0012	1	#Diode, Rectifier		220-3875	1	12 Volt DC
12	868-0001	1	#Nut, Hex - Jam (1/4-28)		220-4106	1	Standard
13	853-0013	1	#Washer, Lock - ET (1/4")				Extended Stack
14	812-0166	1	#Screw, Machine - Round Head (1/4-20 x 5")		220-3873	1	24 Volt DC
15	870-0212	3	#Nut, Self-Locking - Hex Washer Head (1/4-20)				60 Hertz - Code J, 3CR - 12 Volt DC
16			#Resistor		220-4106	1	12.5MDL3 - 60 Hertz
	304-0649	1	12 Volt DC Sets		220-4108	1	Code A, 1R - 12 Volt DC
	304-0650	1	24 Volt DC Sets		220-3873	1	Code J, 3CR - 12 Volt DC
17	304-0006	2	#Washer, Centering				Code L, 18R - 12 Volt DC
18	150-1938	1	#Bracket, Point and Resistor Mounting				15.0MDL3 - 60 Hertz
19	800-0051	1	Screw, Cap - Hex Head (3/8-16 x 1-1/4")				Code J, 3CR
20	856-0010	1	Washer, Lock - EIT (3/8")		220-4106	1	12 Volt DC
21	150-0717	1	Switch, Overspeed		220-4108	1	24 Volt DC
22	526-0077	2	Washer, Flat (13/32" ID x 1-1/4" OD x 1/4" Thk)		220-3873	1	Code L, 18R - 12 Volt DC
23	862-0003	4	Nut, Hex (3/8-16)				MDL4
24	850-0050	4	Washer, Lock - Spring (3/8")		220-3780	1	50 Hertz Sets
25			Stud		220-3781	1	Code P, 53C - 12 Volt DC
			MDL3		220-3800	1	Code P, 53C - 24 Volt DC
	520-0798	4	3/8-16 x 10 3/8"		220-3801	1	Code Z, 518R - 12 Volt DC
	520-0799	4	3/8-16 x 11 1/8"				Code Z, 518R - 24 Volt DC
			MDL4				60 Hertz Sets
	520-0800	4	Single Phase Sets		220-3778	1	Code J, 3C - 12 Volt DC
			Three Phase Sets		220-3779	1	Code J, 3C - 24 Volt DC
	520-0799	4	Standard		220-3792	1	Code J, 3C - 32 Volt DC
	520-0800	4	Extended Stack - Code L, 18		220-3798	1	Code G, 4XR - 12 Volt DC
			MDL6		220-3797	1	Code L, 18R - 12 Volt DC
	520-0802	4	Single Phase Sets				- Standard
	520-0858	4	Three Phase Sets		220-3872	1	Code L, 18R - 12 Volt DC
27	509-0094	1	Seal, O-Ring				- Extended Stack
28	815-0194	2	Screw, Tapping - Hex Head with ET Lockwasher (#10-32 x 3/8")		220-3798	1	Code L, 18R - 24 Volt DC
29	232-2418	1	Board, Terminal				MDL6
30			Screw, Cap - Socket Head		220-4116	1	50 Hertz Sets
			MDL3		220-4116-01	1	Code M, 53BR, 12 Volt DC
	802-0038	4	1/4-20 x 1 1/2" - Standard Exciter Stator		220-4116-02	1	Code M, 53BR, 24 Volt DC
	802-0040	4	1/4-20 x 2" - Extended Stack Exciter Stator		220-4116-03	1	Code P, 53CR, 12 Volt DC
			MDL4 and MDL6		220-4116-04	1	Code P, 53CR, 24 Volt DC
31	850-0040	4	Washer, Lock - ET (1/4")		220-4126-01	1	Code Z, 518R, 24 Volt DC
33			Stator, Exciter		220-4126-02	1	Code Z, 518R, 24 Volt DC
			MDL3				60 Hertz Sets
	220-2009	1	Standard		220-4116	1	Code J, 3CR and B, 3R, 12 Volt DC
	220-2010	1	Extended Stack		220-4116-01	1	Code J, 3CR, 24 Volt DC
			MDL4				Code L, 18R, 12 Volt DC
	220-2010	1	Standard		220-4126-03	1	Standard
	220-2309	1	Environmentally Protected		220-3979	1	Extended Stack
	220-2010	1	MDL6		220-4126-04	1	Code L, 18R, 24 Volt DC
				36	800-2034	6	Screw, Cap - Hex Head (M6 x 20mm)
				37	850-2006	6	Washer, Lock - Spring (M6)
				38	234-0688	2	Baffle, Air
				39	800-2029	8	Screw, Cap - Hex Head (M6 x 12mm)
				40	526-2080	8	Washer, Flat (M6)
				41	234-0689	1	Guard, Fan - Upper
				42	234-0770	1	Guard, Fan - Lower
				44	800-2085	8	Bolt, Hex Head (M10 x 20mm)
				45	850-2010	8	Washer, Lock - Spring (M10)

## Generator



## Generator

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
46			Rotor Assembly, Generator (Includes Parts Marked *)	54			Rotor Assembly, Exciter (Includes Parts Marked †)
			MDL3				MDL3
	201-3374	1	Standard		201-2151	1	Standard
	201-3058	1	Extended		201-2152	1	Extended Stack
			MDL4				MDL4
	201-3051	1	Single Phase Sets		201-2152	1	* Standard
			Three Phase Sets		201-2298	1	Environmentally Protected
	201-3058	1	Standard		201-2152	1	MDL6
	201-3051	1	Extended Stack - Code L. 18	55	870-0131	8	†Nut, Self-Locking - Hex with ET Lockwasher (#10-32)
			MDL6	56	526-0008	12	†Washer, Flat (#10)
	201-3051-02	1	Single Phase Sets	57	813-0100	4	†Screw, Machine - Round Head (#10-32 x 1/2")
	201-3051-01	1	Three Phase Sets	58	853-0008	4	†Washer, Lock - ET (#10)
47	805-0025	8	*Bolt, Hex Head - Slotted - Grade 8 (7/16-14 x 3/4")	60	358-0069	1	†Rectifier Assembly - Positive
48	526-0249	8	*Washer, Flat - Hardened (15/32" ID x 1" OD x 1/8" Thk)	61	358-0070	1	†Rectifier Assembly - Negative
49	232-2921	1	*Disk, Drive	62	515-0094	1	*Key - Exciter Rotor
50	205-0145	1	*Fan, Generator	63	856-0006	2	Washer, Lock - EIT (1/4")
51	510-0112	1	*Bearing, Ball				
52	870-0284	1	*Nut, Self-locking - Hex (1-1/8-12)				
53	232-2398	1	*Spacer, Bearing				

⊗ - Parts Included in 150-1446 Bracket and Point Assembly.

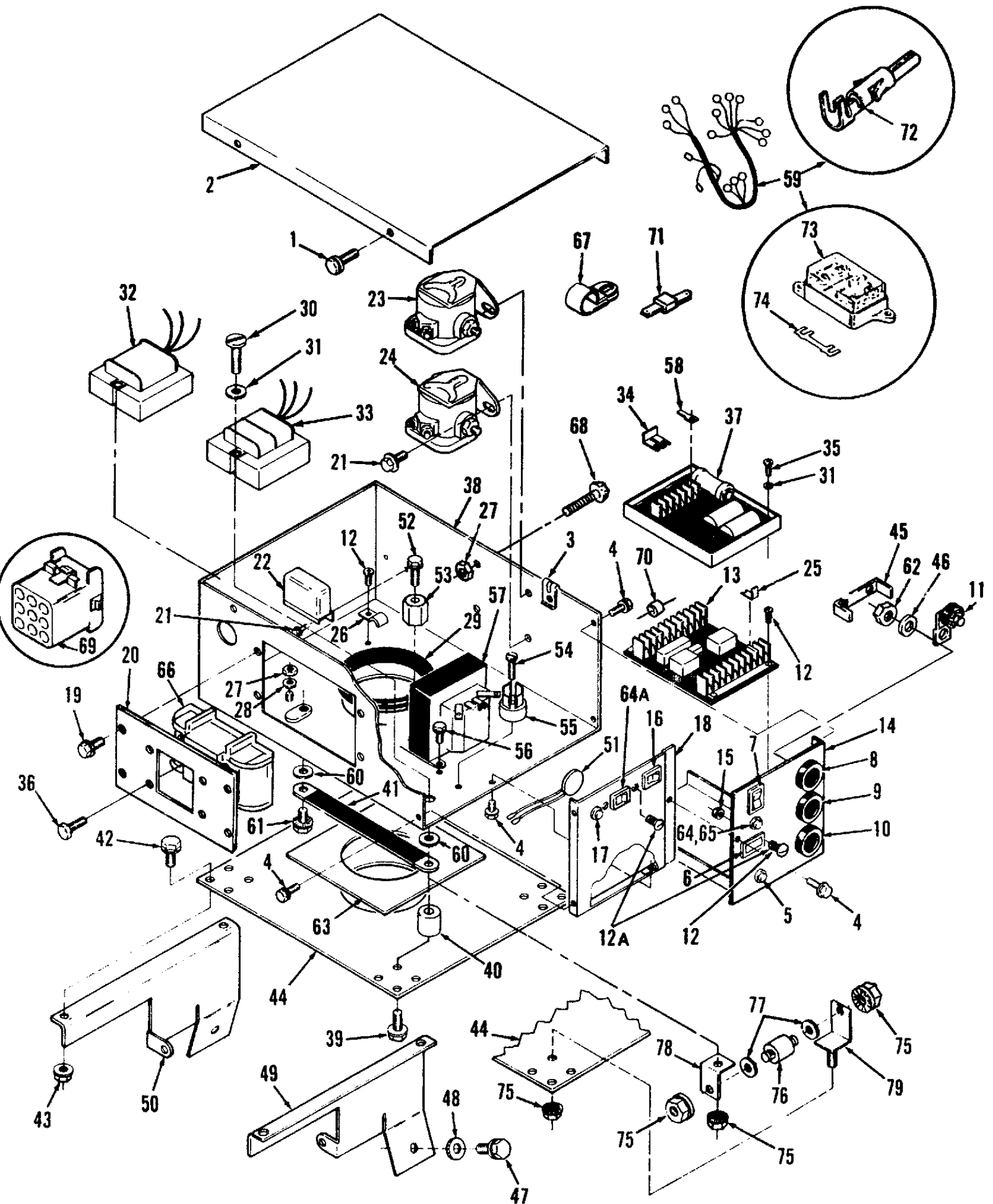
# - 12 and 24 Volt DC Sets

\* - Parts Included in Generator Rotor Assemblies.

† - Parts Included in Exciter Rotor Assemblies.



# Control

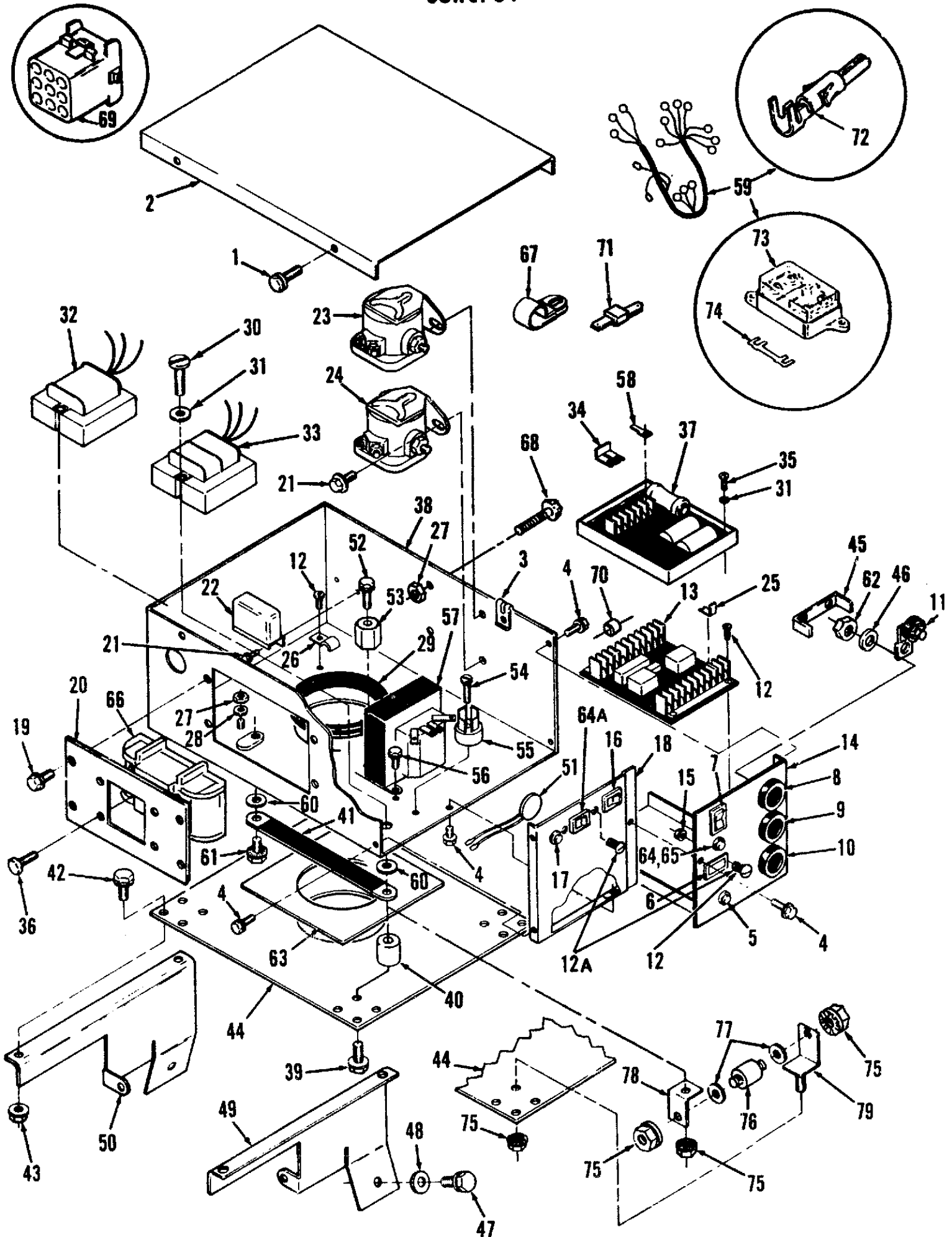


# Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0005	4	Screw, Self-locking - Hex Washer Head (#10-32 x 1/2")	20			Plate, Cover - Access MDL3
2	301-7983	1	Cover, Control	301-7684	1		Controls Without Breakers
3	870-0398	4	Nut, Retaining (#10-32)	301-7944	1		Controls With Two-Pole Breakers
4	821-0004	6	Screw, Self-locking - Hex Washer Head (#10-32 x 5/16")				MDL4
5	320-1139	1	Breaker, Circuit (CB12)	301-7684	1		Controls Without Breakers
6	302-0885	1	Meter, Time Totalizing (M11)	301-7944	1		Controls With Two-Pole Breakers
7	308-0739	1	Switch, Rocker (S11)				Controls With Three-Pole Breakers
8	193-0352		*Gauge, Pressure - Oil (M12) (For 12 Volt DC and 24 Volt DC with Resistor)	301-7943	1		MDL6
9	193-0351	1	*Gauge, Temperature - Coolant (M13) (For 12 Volt DC and 24 Volt LDC with Resistor)	301-7684	1		Controls Without Breakers
10			*Voltmeter (M14)	301-9723	1		Controls With Two-Pole Breakers
	302-1641	1	12 Volt DC	21	821-0008	6	Screw, Cap - Hex Washer Head (1/4-20 x 5/16")
	302-1642	1	24 Volt DC	22			Regulator, Voltage (K16)
11	193-0250	2	*Resistor, Gauge (24 Volt DC Oil Pressure and Coolant Temperature Gauges)	305-0383	1		12 Volt DC
12	815-0544	7	Screw, Machine - Round Head - Cross Recessed with IT Lockwasher (#6-32 x 1/2") (MDL3 and MDL4)	305-0700	1		24 Volt DC
12A	815-0544	9	Screw, Machine - Round Head - Cross Recessed with IT Lockwasher (#6-32 x 1/2") (MDL6)	23			Relay, Start Solenoid - Pilot (K11)
13			Monitor, Engine (A11)	307-1166	1		12 Volt DC - MDL3, MDL4 and MDL6
	300-2604	1	12 Volt DC	307-2169	1		24 Volt DC - MDL3, MDL4 and MDL6
	300-2605	1	24 Volt DC	307-2170	1		32 Volt DC - MDL4 Only
	300-2606	1	32 Volt DC	24			Relay, Start Solenoid - Heater (K13)
14			Face, Control (With Tray)	307-1031	1		12 Volt DC - MDL3, MDL4 and MDL6
			MDL3	307-2167	1		24 Volt DC - MDL3, MDL4 and MDL6
	301-9491		Controls Without DC Gauges	307-2168	1		32 Volt DC - MDL4
	301-9492	1	Controls With DC Gauges	25	332-1564	2	Terminal, Tab
			MDL4	26	518-0437	1	Clip, Holddown
			Controls Without DC Gauges	27	871-0016	4	Nut, Hex - Brass (1/4-20) Ground
	301-7701	1	Spec A	28	853-0013	2	Washer, Lock - ET (1/4") Ground
	301-9491	1	Begin Spec B	29	508-0115	1	Grommet - 2-1/2" Hole
	301-9492	1	* Controls With DC Gauges	30	812-0071	4	#Screw, Machine - Round Head (#6-32 x 1-1/2")
			MDL6	31	853-0003	8	#Washer, Lock - ET (#6)
	301-7701	1	Controls Without DC Gauges	32	315-0386	1	#Transformer, Voltage (T21)
	301-9492	1	* Controls With DC Gauges	33	315-0391	1	#Reactor (L21)
15	870-0183	2	Nut, Hex - With ET Lockwasher (#6-32)	34	332-2605	1	#Jumper
16	320-1140	1	Breaker, Circuit (CB11)	35	812-0070	4	#Screw, Machine - Round Head (#6-32 x 1-1/4")
17	320-1121	1	#Breaker, Circuit (CB12)				#Screw, Machine - Round Head (#6-32 x 1/2")
18			Face, Control	36	812-0063	4	#Regulator, Voltage - Switching (VR21)
			MDL3	37	305-0688	1	Box, Control
	301-7694	1	50 Hertz Sets	38	301-7807	1	Screw, Locking Head - Flange (5/16-18 x 1/2") (MDL4 and MDL6)
	301-7951	1	60 Hertz Sets	39	821-0014	4	Dampener, Vibration MDL4 and MDL6
	301-7951	1	+ Controls Without Switching Voltage Regulator	40	402-0527	4	Strap, Ground - Control
	301-7694	1	# Controls With Switching Voltage Regulator	41	337-0049	1	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
			MDL6	42	821-0010	4	Nut, Self-Locking - Hex Washer Head (1/4-20)
	301-9746	1	+ Controls Without Switching Voltage Regulator	43	870-0212	4	
	301-9775	1	# Controls With Switching Voltage Regulator				
19	821-0004	4	Screw, Self-Locking - Hex Washer Head (#10-32 x 5/16")				



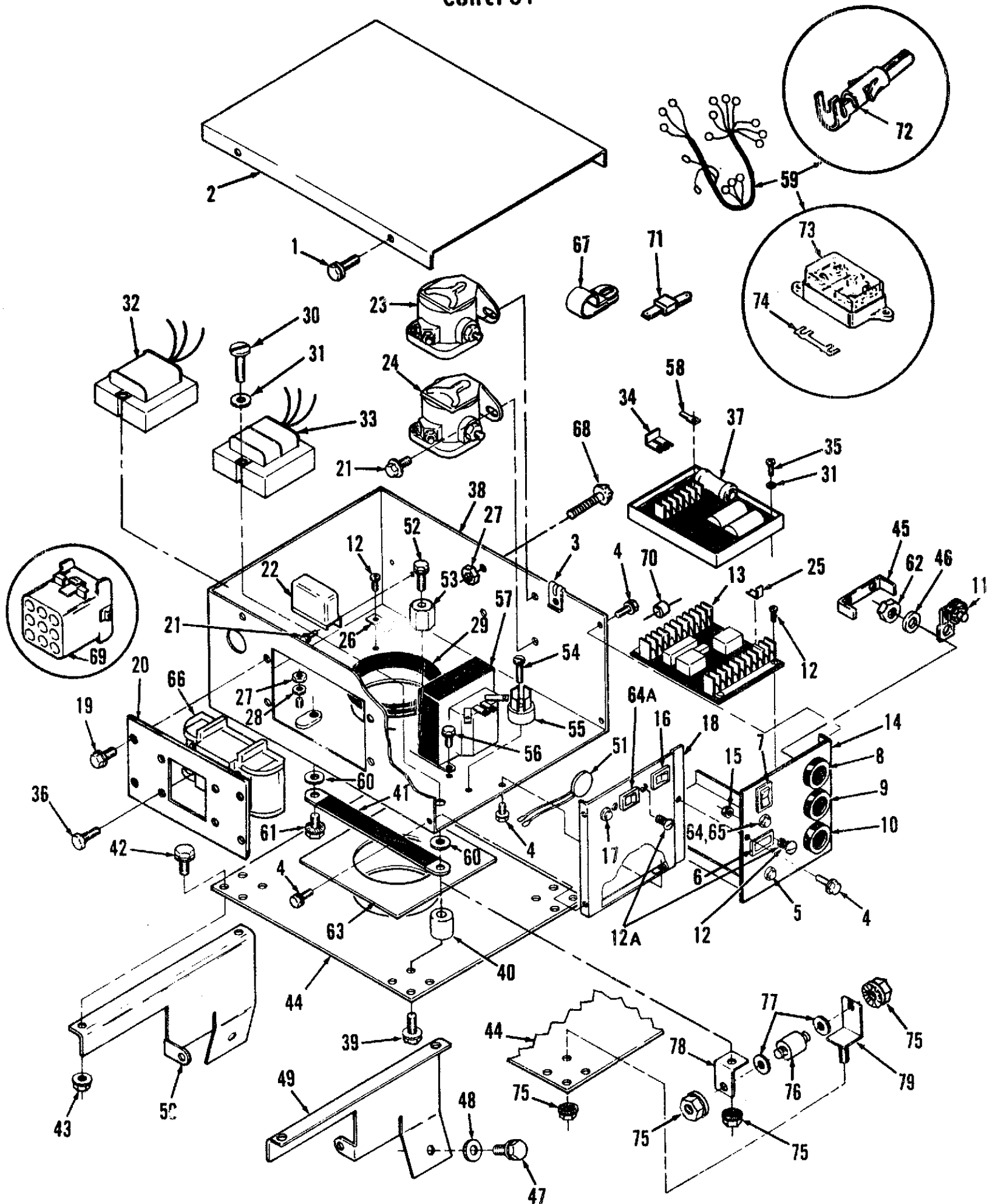
# Control



# Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
44	301-7685	1	Plate, Mounting - Control	338-1675-01	1		Controls Without DC
45	302-0270	3	*Clamp, Mounting - Gauge				Gauges (32 Volt DC)
46	526-0049	9	*Washer, Flat (#10)	338-1675-03	1	*	Controls With DC Gauges (12 and 24 Volt DC)
47	815-0236	2	Screw, Tapping - Hex Head (5/16-18 x 5/8")				Begin Spec B
48	856-1008	2	Washer, Lock - EIT (5/16")				Controls Without DC
49			Bracket, Mounting - Right Hand				Gauges (12 and 24 Volt DC)
	301-7700	1	MDL3 and MDL4	338-1949-02	1		Sets Without Preheat
	301-9733-01	1	MDL6	338-2363-02	1		Sets With Preheat (Includes Parts Marked >)
50			Bracket, Mounting - Left Hand				Controls Without DC
	301-7699	1	MDL3 and MDL4				Gauges (32 Volt DC)
	301-9733-02	1	MDL6				Sets Without Preheat
51	305-0703	1	+Suppressor, Voltage (RV21)	338-1949-01	1		Sets With Preheat (Includes Parts Marked >)
52	821-0008	4	+Screw, Self-locking - Hex Washer Head (1/4-20 x 5/16")	338-2363-01	1		Controls With DC Gauges (12 and 24 Volt DC)
53	332-2370	2	+Standoff, Insulator (TB1, TB2)				Sets Without Preheat
54	815-0346	1	+Screw, Machine - Round Head - Brass with ET Lockwasher (#10-32 x 5/8")			*	Sets With Preheat (Includes Parts Marked >)
55	305-0696	1	+Bridge, Rectifier (CR21)				Controls With DC Gauges (12 and 24 Volt DC)
56	821-0004	4	+Screw, Self-Locking - Hex Washer Head (#10-32 x 5/16")	338-1949-03	1		Sets Without Preheat
57			+Transformer, Regulating - Voltage (T21)	338-2363-03	1		Sets With Preheat (Includes Parts Marked >)
	315-0553	1	MDL3 and MDL4 (50 Hertz Sets)				Engine to Control
	315-0552	1	MDL3 and MDL4 (60 Hertz Sets)				Spec A (Includes Parts Marked \$)
	315-0649-02	1	MDL6 (50 Hertz Sets)	338-1674-02	1		Controls Without DC
	315-0649-01	1	MDL6 (60 Hertz Sets)				Gauges (12 and 24 Volt DC)
58	332-2617		#Terminal, Tab	338-1674-01	1		Controls Without DC
59			Harness, Wiring				Gauges (32 Volt DC)
			MDL3	338-1674-03	1	*	Controls With DC Gauges (12 and 24 Volt DC)
			Control Box				Begin Spec B
			Controls Without DC	338-1950-02	1		Controls Without DC
			Gauges				Gauges (12 and 24 Volt DC)
	338-1949-02	1	Sets Without Preheat				
	338-2363-02	1	Sets With Preheat (Includes Parts Marked *)	338-1950-01	1		Controls Without DC
			Controls With DC Gauges	338-1950-03	1	*	Gauges (32 Volt DC)
	338-1949-03	1	Sets Without Preheat				Controls With DC Gauges (12 and 24 Volt DC)
	338-2363-03	1	Sets With Preheat (Includes Parts Marked *)				
			Engine to Control	338-1679	1	#	MDL6
	338-1955-02	1	Controls Without DC Gauges				Voltage Regulator Assembly to Circuit Breaker, Engine
	338-1955-03	1	Controls With DC Gauges	338-1678	1	+	Monitor and Exciter Field
	338-1678	1	Rectifier Bridge to Exciter Field and Transformer - 60 Hertz Sets				Rectifier Bridge to Exciter Field and Transformer
	338-1679	1	Voltage Regulator Assembly to Circuit Breaker, Engine Monitor and Exciter Field - 50 Hertz Sets	338-2038-01	1		Control Box (12 and 24 Volt DC)
				338-2387-01	1		
						*	Controls Without DC gauges
	338-1679	1	#				Sets Without Preheat
			Voltage Regulator Assembly to Circuit Breaker, Engine Monitor and Exciter Field	338-2038-02	1		Sets With Preheat
				338-2387-02	1		(Includes Parts Marked >)
	338-1678	1	+				Controls With DC Gauges
			Rectifier Bridge to Exciter Field and Transformer	60	856-0008	2	Washer, Lock - EIT (5/16")
			Control Box	61	821-0014	1	Screw, Locking Head - Flange (5/16-18 x 1/2")
			Spec A	62	871-0010	9	*Nut, Hex - Brass (#10-32)
	338-1675-02	1	Controls Without DC	63	405-3156	2	Insulation
			Gauges (12 and 24 Volt DC)	64	320-0548	1	Breaker, Circuit (CB13)
							MDL3

# Control

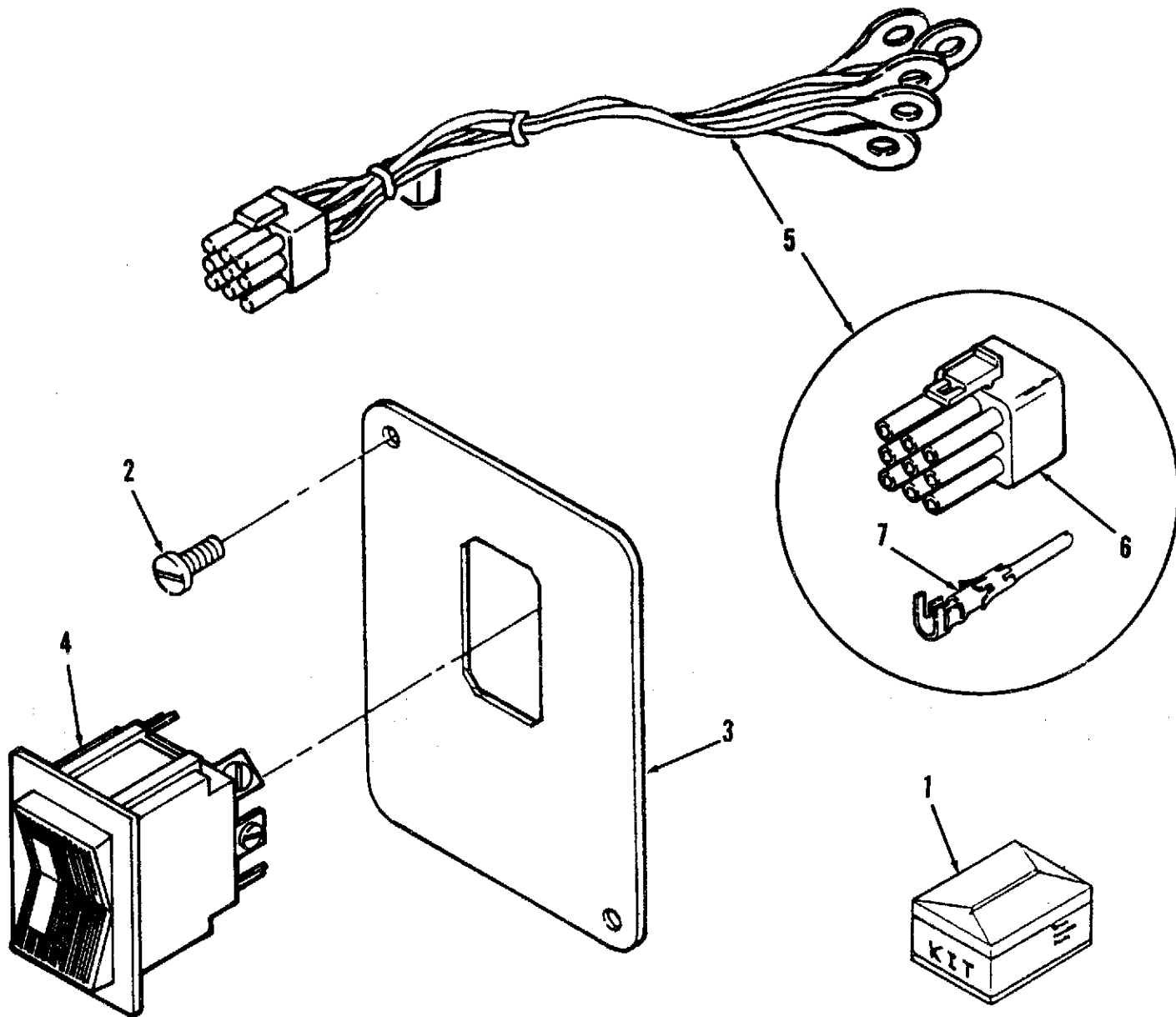


# Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
	320-0548	1	MDL4 (Begin Spec B)	69	323-1325	1	Cap. Connector - 9 Place - Control Box Wiring Harness - Sets With Preheat (J3)
64A	320-1554	1	Breaker, Circuit (CB13) - MDL6	70	357-0050	1	Rectifier - Sets With Preheat (CR2)
65	517-0132	1	Plug, Hole - MDL6	71	357-0030	1	Rectifier - Sets With Preheat (CR3)
66			Breaker, Circuit (CB22) MDL3	72	323-1200	6	>Socket, Contact
	320-1568-08	1	10.0 MDL3 50 Amp	73	321-0263	1	Holder, Fuse (MDL4 - Spec A Only)
	320-1568-09	1	12.0 MDL3 55 Amp	74	321-0262-02	1	Fuse, Strip - 50 Amp (F1)(MDL4 - Spec A Only)
			12.5 MDL3	75	870-0257	9	Nut, Locking Head - Flange (5/16-18)(MDL3 Only)
	320-1570-07	1	120 Volt Sets 100 Amp	76	402-0633	4	Dampener, Vibration
	320-1568-09	1	120/240 Volt Sets 55 Amp	77	856-0008	10	Washer, Lock - EIT (5/16") (MDL3 Only)
	320-1423	1	15.0MDL3, 70 Amp	78	301-9544	4	Bracket, Dampener (MDL3 Only)
		1	MDL4	79	301-8955	4	Bracket, Dampener (With Stud) (MDL3 Only)
			Single Phase Sets				
	320-1423	1	70 Amp, 240 Volt AC				
	320-1210	1	85 Amp, 240 Volt AC				
	320-1207	1	100 Amp, 240 Volt AC				
			Three Phase Sets				
	320-1426	1	35 Amp, 240 Volt AC				
	320-1209	1	60 Amp, 240 Volt AC				
	320-1208	1	70 Amp, 240 Volt AC				
			MDL6				
			Single Phase Sets				
	320-1553-02	1	150 Amp, 250 Volt AC				
67			Clamp, Loop - Insulated (Wiring Harness)				
	332-2634	3	MDL3				
	332-1356	3	MDL4 and MDL6				
68	821-0012	2	Screw, Self-Locking - Hex Flange Head (1/4-20 x 1 1/8") Ground				

- \* - Parts Used on Controls With DC Gauges.
- # - Parts Used on Controls With Switching Voltage Regulator.
- + - Parts Used on Controls Without Switching Voltage Regulator.
- \$ - Parts Included in Engine to Control Wiring Harness for MDL4 Spec A Only.
- > - Parts Included in 338-2363-01, -02, -03, and 338-2387-01 and -02 Wiring Harnesses.

# Standard Remote Control Panel Kit



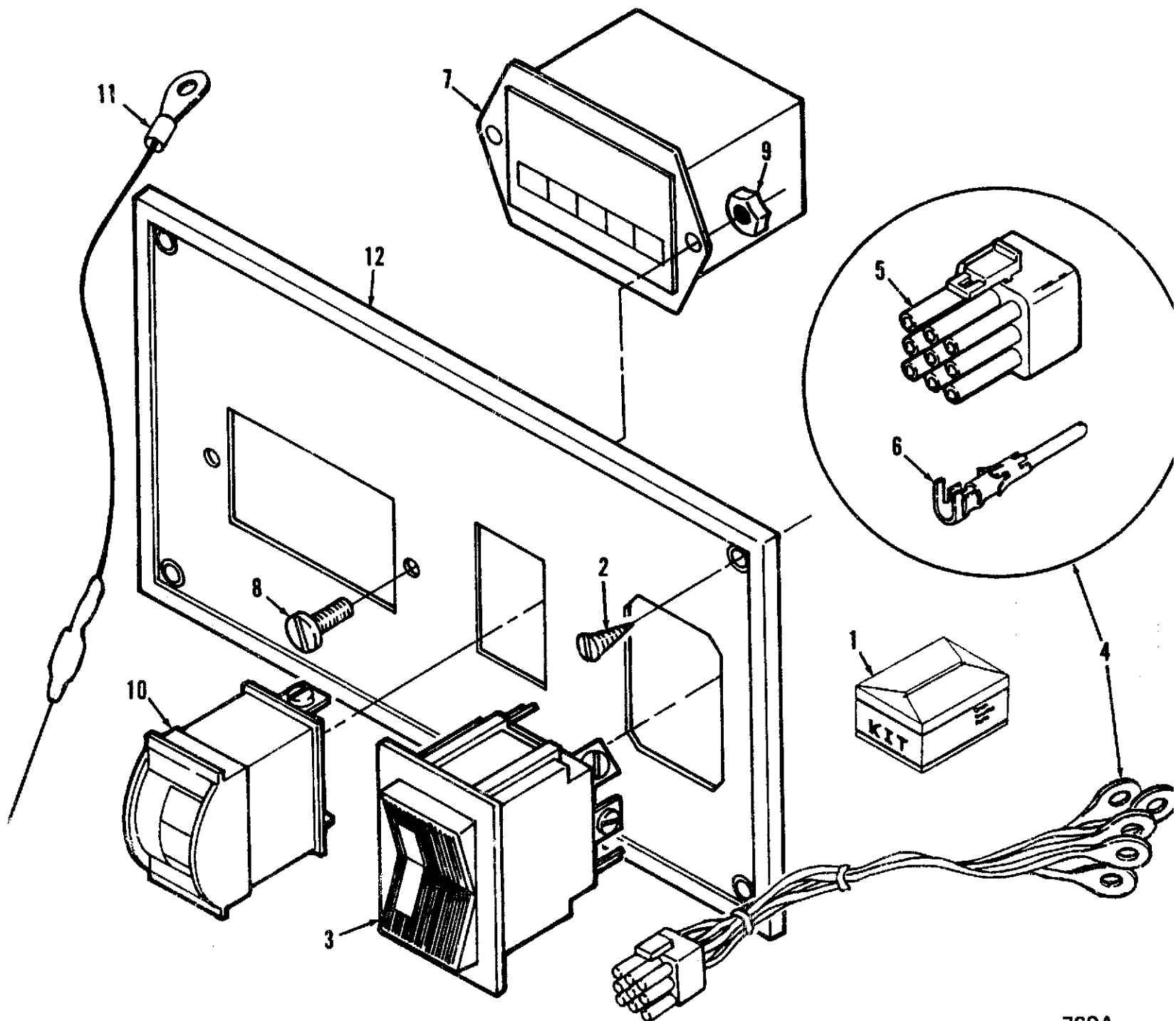
759A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	-	1	Kit, Panel - Remote Control - Standard (With Provision for Preheat) (Includes Parts Marked *) (Part number not available at time of printing)
2	808-0023	2	*Screw, Sheet Metal - Round Head (#8 x 1/2")
3	319-0491	1	*Panel (Without Decals)
	98-5948	1	* Decal - Front
	98-5945	1	* Decal - Rear
4	308-0827	1	*Switch, Rocker (S11)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
5	338-2362-01	1	*Harness, Wiring (6") (Includes Parts Marked #)
6	323-1291	1	#Housing, Connector (9 Place) (P4)
7	323-1199	5	#Pin, Contact

\* - Parts Included in Remote Control Panel Kit  
# - Parts Included in 338-2362-01 Wiring Harness.

# Deluxe Remote Control Panel Kit



760A

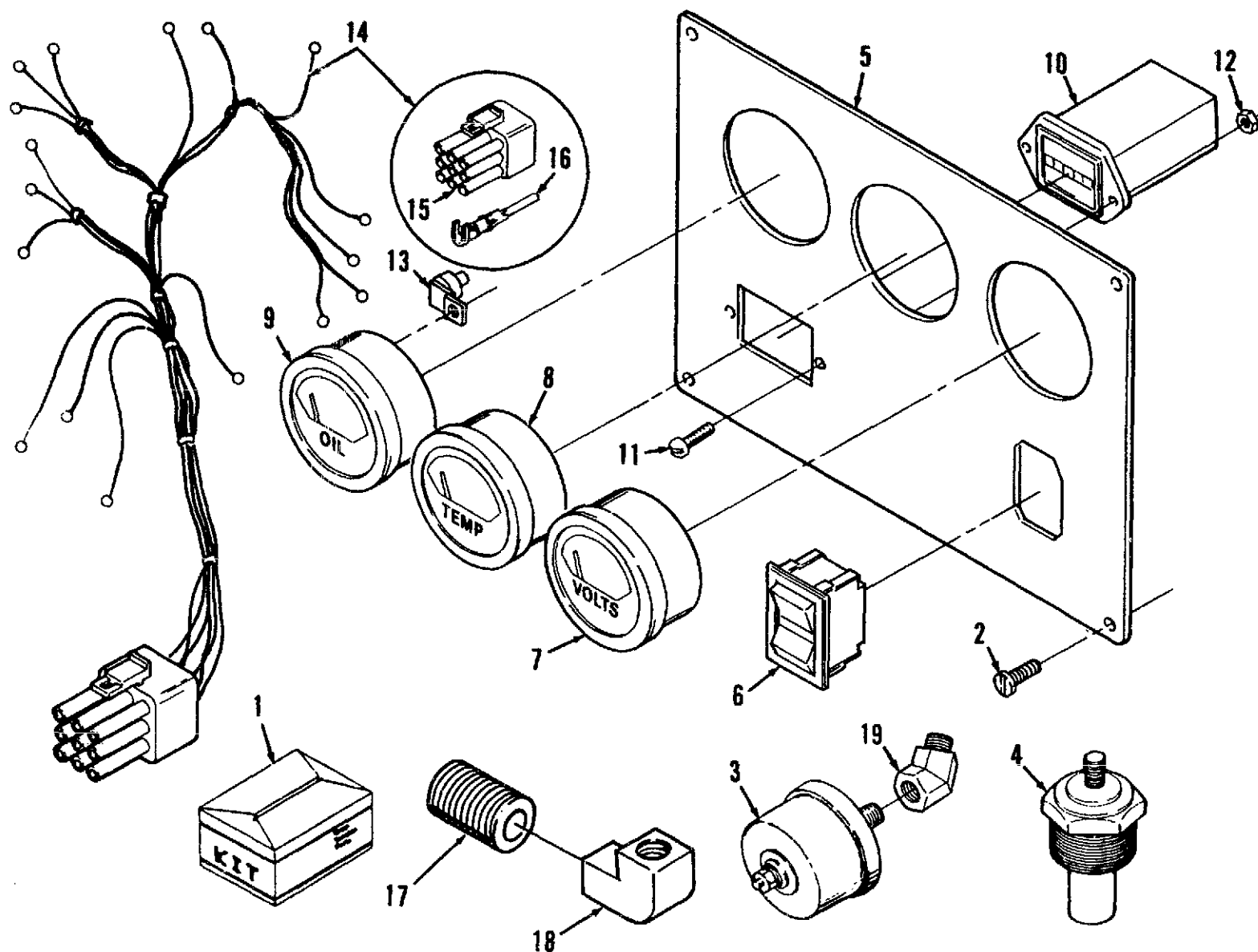
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	-	1	Kit, Panel - Remote Control - Deluxe (With Provision for Preheat) (Includes Parts Marked *) (Part number not available at time of printing)	8	815-0385	2	*Screw, Machine - Round Head (#6-32 x 1/2")
2	808-0023	4	*Screw, Sheet Metal - Round Head (#8 x 1/2")	9	870-0183	2	*Nut, Hex - With ET (#6-32)
3	308-0827	1	*Switch, Rocker	10	302-0885	1	*Meter, Battery Condition
4	338-2362-01	1	*Harness, Wiring (6") (Includes Parts Marked #)	11	359-0034	1	*Diode
5	323-1291	1	#Housing, Connector (9 Place) (P4)	12	319-0492	1	*Panel (Without Decals)
6	323-1199	5	#Pin, Contact		98-5947	1	* Decal - Front
7	302-0885	1	*Meter, Time Totalizing (M11)		98-5944	1	* Decal - Rear

\* - Parts Included in - Remote Control Panel Kit.

# - Parts Included in 338-2362-01 Wiring Harness.



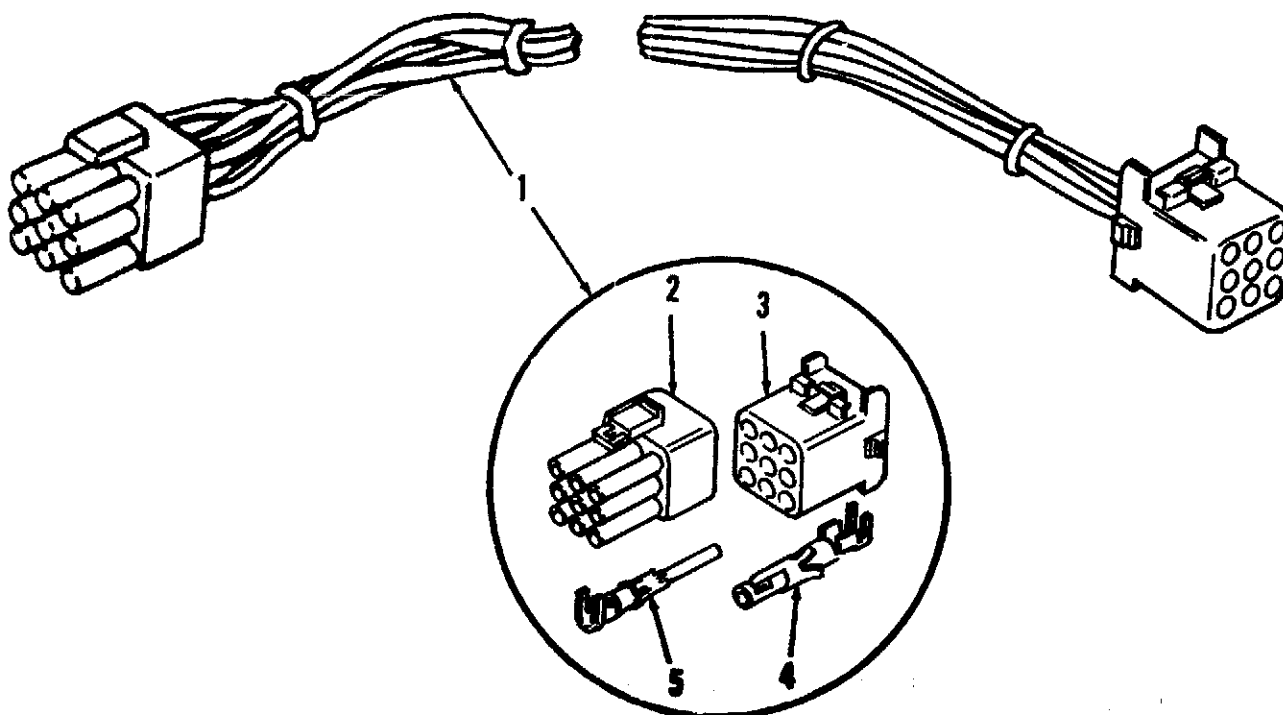
## Remote Control DC Gauge Panel Kit



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Kit, Gauge Panel - Remote Control (Includes Parts Marked *)	9	193-0352	1	Gauge, Oil Pressure (Includes Mounting Hardware) (M12)
	300-3262	1	12 Volt DC	10	302-0885	1	Meter, Time Totalizing (M11)
	300-3263	1	24 Volt DC	11	815-0385	2	Screw, Machine - Round Head (#6-32 x 1/2")
2	808-0023	4	*Screw, Sheet Metal - Round Head (#8 x 1/2")	12	870-0183	2	Nut, Hex - With ET (#6-32)
3	193-0244	1	*Sender, Oil Pressure (E1)	13	193-0250	2	Resistor (Mounted on water temperature and oil pressure gauges with 24 Volt DC application) (R11, R12)
4	193-0318	1	*Sender, Water Temperature (E2)	14	338-2222-01	1	Harness, Wiring - Control Panel (Includes Housing and Pins)
5	319-0141	1	Panel (Without Decals)	15	323-1291	1	Housing, Connector (P4)
	98-5803	1	Decal - Front	16	323-1199	7	Pin, Contact
	98-5761	1	Decal - Rear	17	502-0046	1	*Nipple, Close (1/8" x 3/4")
6			Switch, Rocker (S11)	18	502-0055	1	*Elbow - 90° (1/8")
	308-0827	1	12 Volt	19	502-0053	1	*Elbow, Street - 45°
	308-0975	1	24 Volt				
7			Voltmeter (Includes Mounting Hardware) (M14)				
	302-1641	1	12 Volt DC				
	302-1642	1	24 Volt DC				
8	193-0351	1	Gauge, Coolant Temperature (Includes Mounting Hardware) (M13)				

\* - Parts Included in Remote Control Gauge Panel Kit.

# **Remote Wiring Harness (Generator Set to Remote Control)**



**762A**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Harness, Wiring - Remote Control (Includes Parts Listed Below)	2	323-1291	1	Housing, Connector
	338-2237	1	15' Long	3	323-1325	1	Housing, Connector
	338-2238	1	25' Long	4	323-1200	8	Socket, Contact
	338-2354	1	45' Long	5	323-1199	8	Pin, Contact



## Paint, Thread Sealant and Miscellaneous Kits

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Paint, Touch Up (Enamel -				Kit, DC Gauge - Generator Set
			13 oz Pressurized Spray Can)				Control (Field Installation
525-0529	-		Brilliant White				Kit)
525-0494	-		Off White (MDL4 Only)	300-3006		1	12 Volt DC
518 0452	-		Sealant, Thread (50 cc Bottle)	300-3007		1	24 Volt DC
				149-2313		1	Kit, Fuel/Water Separator

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508-0055	17	800-0080	14	821-0018	21	870-0250	21
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509-0142	5	800-2034	21	850-0055	14	871-0016	25
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515-0094	23	800-2059	14	850-2006	3		
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520-0798	21	802-0038	21	850-2006	21		
520-0799	21	802-0040	21	850-2008	8		
520-0800	21	805-0025	23	850-2008	13		
520-0802	21	808-0023	30	850-2010	21		
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## Introduction

This parts manual applies to the standard generator sets as listed below. Parts are arranged in groups of related items and each illustrated part is identified by a reference number corresponding to the same reference number in the parts list. Unless otherwise mentioned in the description, parts are interchangeable between models. All references in the parts description that pertain to specification letter differences for replacement parts are for the model listed on the identification label affixed to the generator set control. Throughout this manual left (non-accessory) and right (accessory) sides are determined by facing the rear or generator end of the set.

### Generator Set Data Table

MODEL IDENTIFICATION	RATING	MODEL IDENTIFICATION	RATING
10.0 MDL3-**/*	10,000 WATTS	12.5 MDL3-**/*	12,500 WATTS
12.0 MDL3-**/*	12,000 WATTS	15.0 MDL3-**/*	15,000 WATTS

### Electrical Data Table

**VOLTAGE CODES	VOLTS	HERTZ	WIRE	PHASE	NOTES
A (1R)	120	60	2	1	
J (3CR)	120, 240, 120/240	60	4	1	+
P (53CR)	110/220, 115/230, 120/240	50	4	1	+
Z (518R)	110, 115, 220, 110/220, 115/230, 120/240	50	12	1	+
L (18R)	120/208, 120/240, 127/220, 139/240, 240/416, 254/440, 277/480	60	12	3	+
Z (518R)	110/190, 110/220, 115/200, 115/230, 120/208, 120/240, 127/220, 220/380, 230/400, 240/416, 254/440	50	12	3	+

\* - The diagonal line (/) in the model and specification number separates generator set characteristics from the specification number and letter. The specification number denotes customer requested options or deviations from a standard (1A, 1B, etc.) model. The specification letter advances (A to B, B to C, etc.) with major manufacturing changes.

\*\* - A letter is now used in the model to indicate the voltage codes and replaces the corresponding number and letter designations (in brackets) as listed in the Electrical Data Table column. (Example: 12.0MDL3-P/ was formerly 12.0MDL3-53CR/) The letter designation change occurred during the later portion of Spec A.

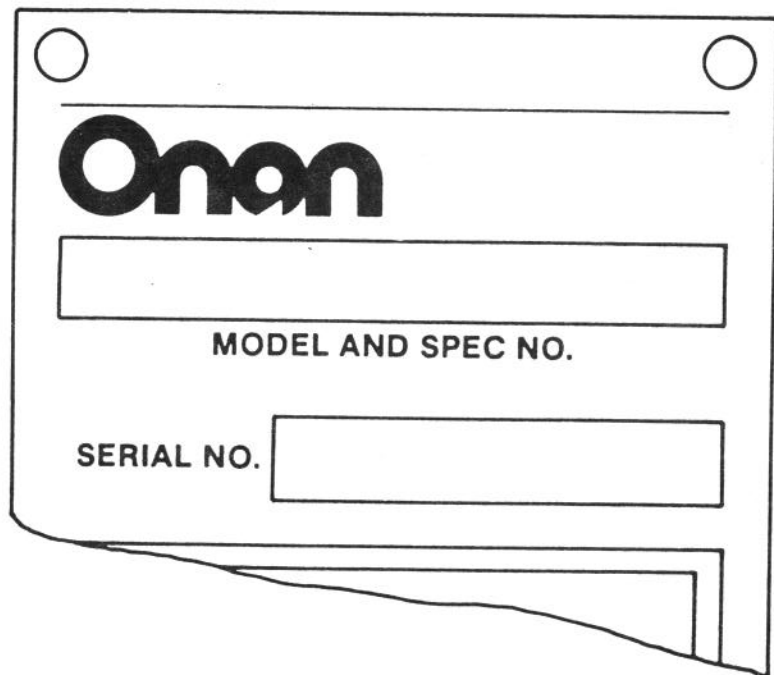
+ - These generators have four load wires which are reconnectible for 120 volt, 2 wire service or 240 volt, 2 wire service or 120/240 volt, 3 wire service.



## General Information

For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.

To avoid errors or delay in filling your parts order, always give the MODEL, SPEC NO. and SERIAL NO. from the Onan nameplate.



A diagram of an Onan nameplate. It features the Onan logo at the top. Below the logo is a large rectangular box labeled "MODEL AND SPEC NO.". Below that is a smaller rectangular box labeled "SERIAL NO.". The nameplate is shown with two mounting holes at the top corners and a tab at the bottom right corner. The text "M-1149" is printed at the bottom right of the nameplate.

For handy reference, insert "YOUR" nameplate information in the spaces above.

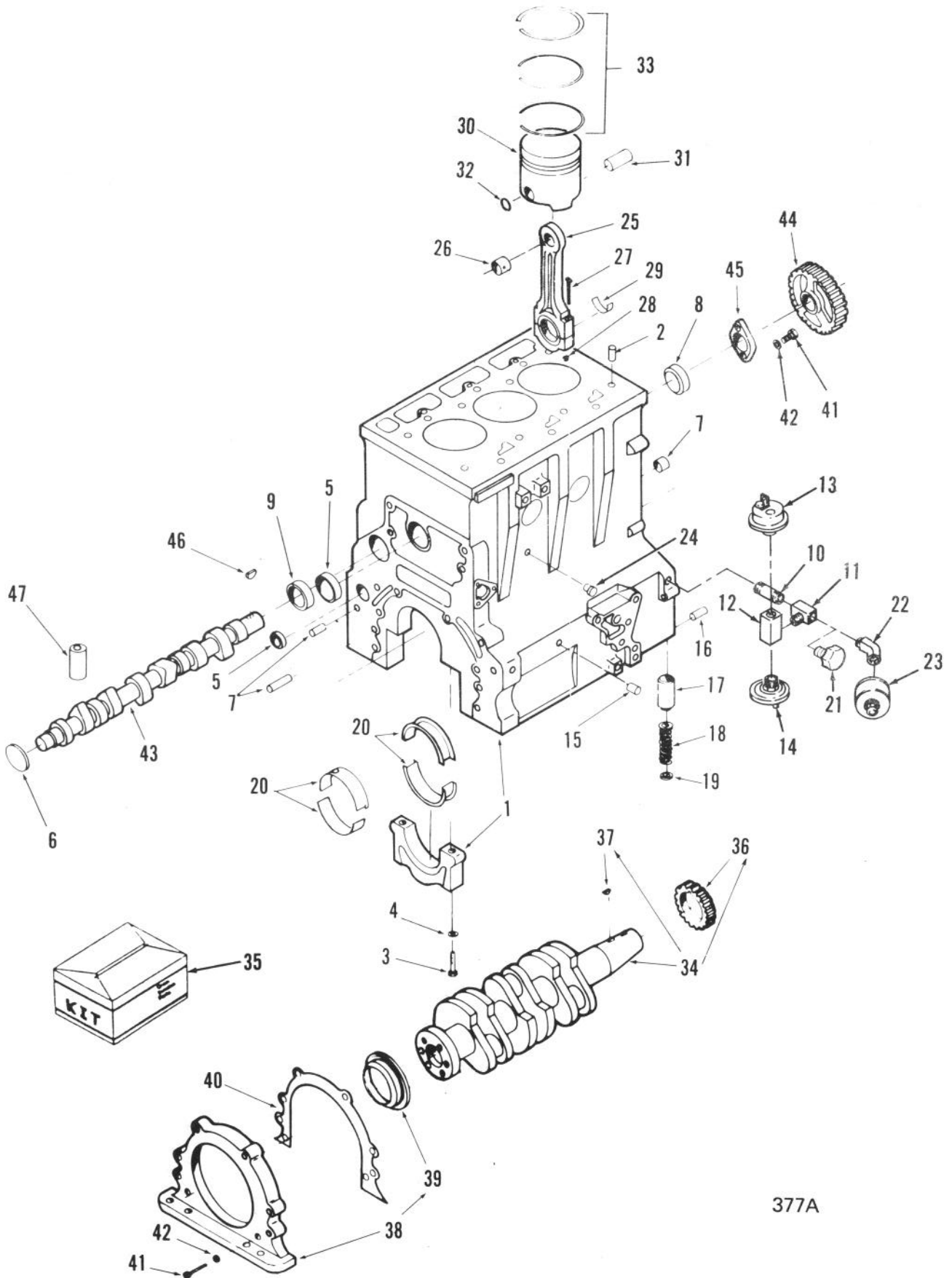
### **▲WARNING**

TAKE ALL NECESSARY PRECAUTIONS WHEN CHECKING OR CHANGING ENGINE OIL NOT TO INGEST, BREATHE THE FUMES OR CONTACT THE OIL. USED ENGINE OILS HAVE BEEN IDENTIFIED BY FEDERAL AND SOME STATE AGENCIES AS CAUSING CANCER.

### **▲WARNING**

TAKE ALL NECESSARY PRECAUTIONS WHEN HANDLING ENGINE GASKETS. DO NOT INGEST, BREATHE, OR CONTACT DUST FROM GASKETS. USE ADEQUATE VENTILATION AND WEAR PROTECTIVE GLOVES, MASK AND CLOTHING. ASBESTOS HAS BEEN IDENTIFIED BY FEDERAL AND SOME STATE AGENCIES AS CAUSING CANCER.

# Cylinder Block



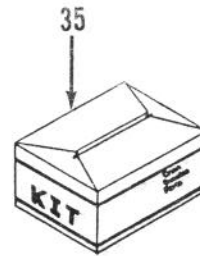
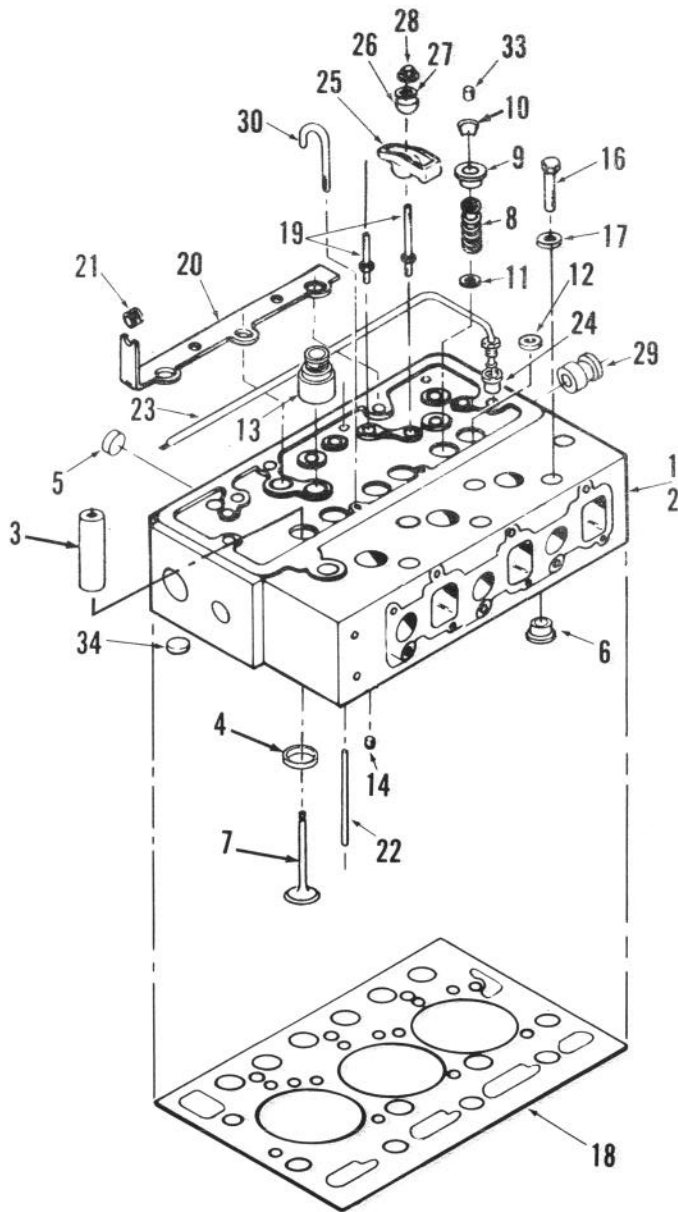
377A

# Cylinder Block

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	110-3322	1	Block Assembly, Cylinder (Includes Parts Marked *)	23	193-0244	1	Sender, Oil Pressure - Sets with Control Gauges (E1)
2	110-2978	2	*Pin, Alignment - Cylinder Head	24	504-0028	1	*Valve, Drain - Coolant
3	720-1801	8	*Screw, Cap - Hex Head - Special	25	114-0313	3	Rod, Connecting (Includes Finished Bearing, Bolts and Nuts)
4	740-1801	8	*Washer, Flat - Special	26	114-0316	3	Bushing, Rod - Connecting (Semifinished)
5			Plug, Cup	27	114-0315	6	Bolt, Rod - Connecting
	517-0141	3	*50.8mm Stainless Steel	28	114-0318	6	Nut, Rod - Connecting
	517-0144	2	*12.7mm Steel	29			Bearing, Rod - Connecting (Half)
	517-0146	1	*31.75mm Stainless Steel		114-0319	6	Standard
	517-0250	1	*54.37mm Stainless Steel (Oversize)		114-0319-01	6	0.25mm Undersize
6	517-0140	1	*Plug, Welch (57.15mm) - Steel		114-0319-02	6	0.50mm Undersize
7			Pin, Alignment		114-0319-03	6	0.75mm Undersize
	775-0074	2	*8mm x 20mm	30			Kit, Piston and Pin (Includes Retaining Rings)
	775-0089	2	*10mm x 20mm		112-0201	3	Standard
	775-0078	2	*8mm x 40mm		112-0202	3	0.25mm Oversize
8	101-0511	1	*Bearing, Camshaft - Front		112-0203	3	0.05mm Oversize
9	101-0471	3	*Bearing, Camshaft - Intermediate and Rear		112-0204	3	0.75mm Oversize
10	505-0104	1	Nipple, Pipe (1/8" x 1-1/2")		112-0205	3	1.0mm Oversize
11	502-0057	1	Tee, Branch - Male	31	112-0165	3	Pin, Piston
12	502-0079	1	Tee, Union	32	518-0409	6	Ring, Retaining - Piston Pin
13	309-0169	1	Switch, Pressure - Oil (Closes at 14 lbs. Descending) (S1)	33			Ring Kit, Piston
14	309-0104	1	Switch, Pressure - Oil (Closes at 5 lbs. Increasing) (S6)		113-0233	3	Standard
15	505-0274	3	*Plug, Pipe (1/8")		113-0234	3	0.25mm Oversize
16	516-2102	1	*Pin, Spring - Regulator Valve		113-0235	3	0.05mm Oversize
17	123-1514	1	*Piston, Valve - Regulator		113-0236	3	0.75mm Oversize
18	123-1511	1	*Spring, Valve - Regulator		113-0237	3	1.0mm Oversizes
19	740-1004	1	*Washer, Flat (M6)	34	104-1585	1	Crankshaft (Includes Gear and Key)
20			Kit, Bearing - Main (Includes Upper and Lower Bearing Half) Front	35	168-0176	1	Kit, Gasket - Lower End (See Separate Page for Components)
	101-0689	1	Standard	36	104-1138	1	Gear, Crankshaft
	101-0690	1	0.25mm Undersize	37	515-0245	1	Key - Crankshaft Gear
	101-0691	1	0.50mm Undersize	38	101-0713	1	Plate, Seal - Rear (Includes Seal)
	101-0692	1	0.75mm Undersize	39	509-0203	1	Seal, Oil - Rear (Includes Wear Sleeve)
			Intermediate	40	101-0600	1	Gasket, Plate - Rear Seal
	101-0685	2	Standard	41	718-1037	8	Screw, Cap - Hex Head (M8 x 25mm)
	101-0686	2	0.25mm Undersize	42	740-1006	8	Washer, Flat (M8)
	101-0687	2	0.50mm Undersize	43	105-0566	1	Camshaft
	101-0688	2	0.75mm Undersize	44	105-0515	1	Gear, Camshaft
			Rear	45	105-0534	1	Retainer, Camshaft
	101-0677	1	Standard	46	515-0245	1	Key - Camshaft Gear
	101-0678	1	0.25mm Undersize	47	115-0275	6	Tappet
	101-0679	1	0.50mm Undersize				
	101-0680	1	0.75mm Undersize				
21	502-0028	1	Plug, Hex (1/8") (Sets without Control Gauges)				
22	502-0053	1	Elbow, Street - 45° (1/8") Sets with Control Gauges				

\* - Parts Included in 110-3322 Cylinder Block Assembly.

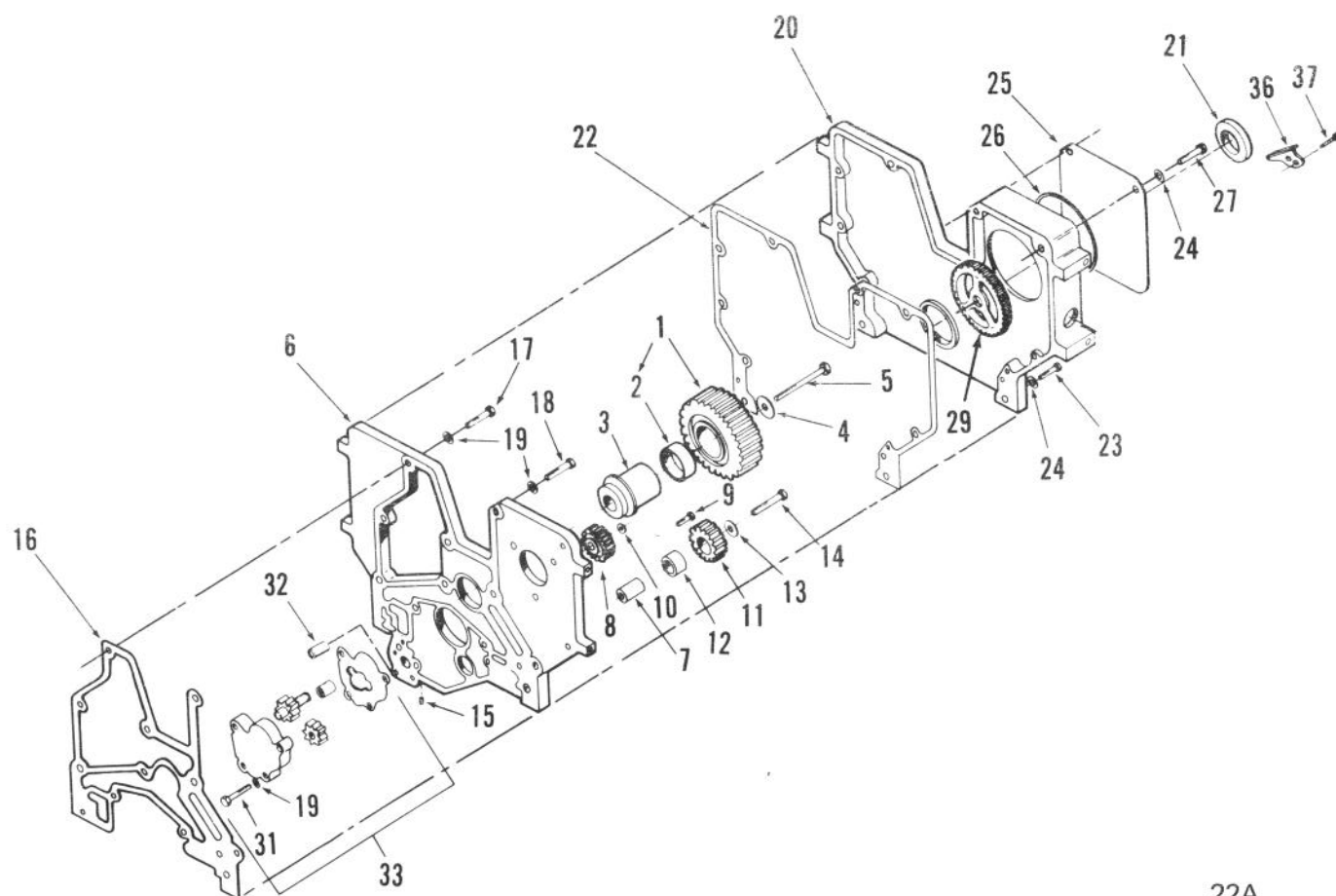
# Cylinder Head



## Cylinder Head

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	110-3325	1	Head Assembly, Cylinder (Includes Guides, Seats, Cup Plugs, Breather Tubes, Valves, Springs, Retainers, Water Pump Adapter, Spacers, Collets, Wear Plates, Sleeves and Seals)	9	110-3015	6	Retainer, Spring - Valve
2	110-3476	1	Head, Cylinder (Includes Seats, Cup Plugs, Sleeves, Water Pump Adapter, Spacers and Guides)	10	110-2752	12	Collet, Lock - Valve
3	110-3495	3	Guide, Valve (Semifinished)	11	110-2991	3	Plate, Wear - Valve Spring (Exhaust)
4	110-3496	3	Intake (Standard)	12	110-3432	3	Spacer, Spring - Valve (Intake)
			Exhaust (Standard)	13	110-3228	6	Seal, Stem - Valve
			Seat, Valve	14	110-2979	3	Sleeve, Sealing
			Intake (Not Original Equipment)	16	720-1802	14	Screw, Cap - Hex Head (M12 x 130mm)
	110-3226-01	3	Standard	17	740-1801	11	Washer, Flat (M12)
	110-3226-02	3	.25mm Oversize	18	110-3220	1	Gasket, Head - Cylinder
	110-3226-03	3	.50mm Oversize	19			Stud, Arm - Rocker
			Exhaust		115-0204	3	Intake (Short)
	110-2781-01	3	Standard		115-0270	3	Exhaust (Long)
	110-2781-02	3	.25mm Oversize	20	115-0310	1	Guide, Pushrod
	110-2781-03	3	.50mm Oversize	21	508-0228	1	Grommet
5			Plug, Cup	22	115-0253	6	Pushrod
	517-0142	5	38.1mm	23	120-1044	1	Tube, Oil - Rocker Arm
	517-0146	4	31.75mm	24	502-0003	1	Connector, Male - Inverted
	517-0162	3	19.05mm	25	115-0316	6	Arm, Rocker
6	110-3137	3	Plug, Hot (Swirl)	26	115-0202	6	Ball, Arm - Rocker
7			Valve	27	526-2119	5	Washer, Flat
	110-3066	3	Intake	28	115-0315	6	Locknut, Arm - Rocker
	110-2840	3	Exhaust	29			Adapter, Pump - Water
8	110-3300	6	Spring, Valve		110-3045	1	Standard
					110-3490	1	0.5mm Oversize
				30	123-1536	2	Tube, Breather
				33	110-3245	6	Cap, Stem - Valve
				34	517-0167	1	Plug, Cup (22.6mm)
				35	168-0177	1	Kit, Gasket - Valve Grind (See Separate Page for Components)

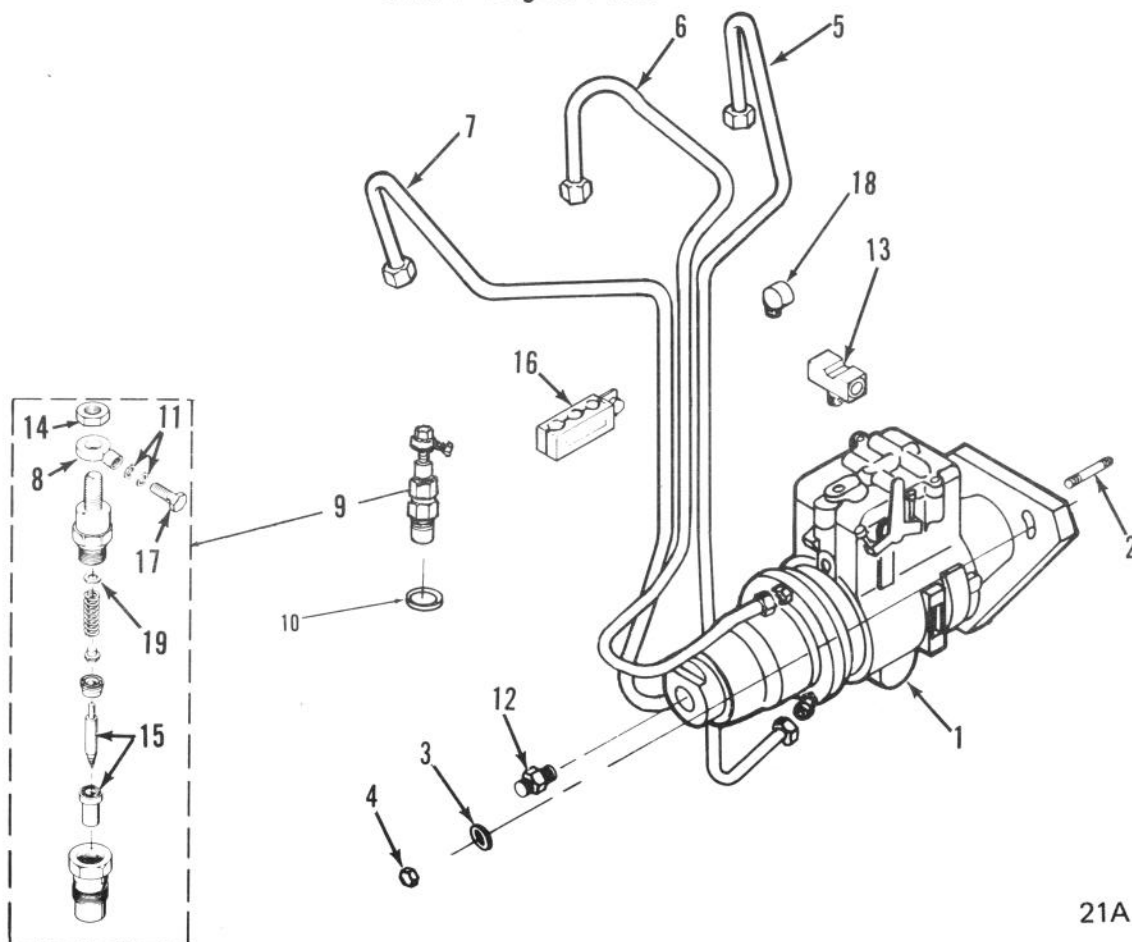
# Gearcase



22A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	105-0513	1	Gear, Idler (Includes Finished Bearing)	19	740-1006	7	Washer, Flat (M8)
2	105-0519	1	Bearing, Gear - Idler (Semifinished)	20	103-0746	1	Gearcase (Includes Oil Seal and Oil Fill Tube)
3	105-0508	1	Shaft, Gear - Idler	21	509-0191	1	Seal, Oil (Includes Wear Sleeve)
4	526-2127	1	Washer, Flat (M10)	22	103-0731	1	Gasket, Gearcase
5	718-1064	1	Screw, Cap - Hex Head (M10 x 75mm)	23	718-1046	2	Screw, Cap - Hex Head (M8 x 70mm)
6	103-0716	1	Backplate, Gearcase		718-1043	5	M8 x 55mm
7	120-0983	1	Shaft, Gear - Oil Pump Idler	24	740-1006	4	Washer, Flat (M8)
8	120-0885	1	Gear, Drive - Oil Pump		740-1010	6	M12
9	718-1035	1	Screw, Cap - Hex Head (M8 x 16mm)	25	103-0735	1	Cover, Gear - Injection Pump
10	526-2106	1	Washer, Flat (M8)	26	509-0263	1	Seal, O-Ring
11	120-1063	1	Gear, Idler - Oil Pump (Includes Finished Bearing)	27	718-1048	1	Screw, Cap - Hex Head (M8 x 80mm)
12	120-1041	1	Bearing, Gear - Oil Pump Idler		718-1044	2	M8 x 60mm
13	526-2107	1	Washer, Flat (M8)		718-1036	1	M8 x 20mm
14	718-1035	1	Screw, Cap - Hex Head (M8 x 16mm)	29	147-0427	1	Gear, Pump - Injection
15	725-1802	1	Screw, Set - Hex Socket (M16 x 16mm)	31	718-1041	2	Screw, Cap - Hex Head (M8 x 45mm)
16	103-0733	1	Gasket, Backplate - Gearcase	32	120-0979	1	Bearing, Shaft - Oil Pump Drive
17	718-1037	1	Screw, Cap - Hex Head (M8 x 25mm)	33	120-1015	1	Kit, Pump - Oil (Includes Drive Shaft Bearing)
	718-1039	2	M8 x 35mm	36	103-0750	1	Plate, Timing
18	725-1801	2	Screw, Cap - Low Socket Head (M8 x 16mm)	37	815-0578	2	Screw, Cap - Hex Head (M6 x 12.5mm)

# Fuel Injection

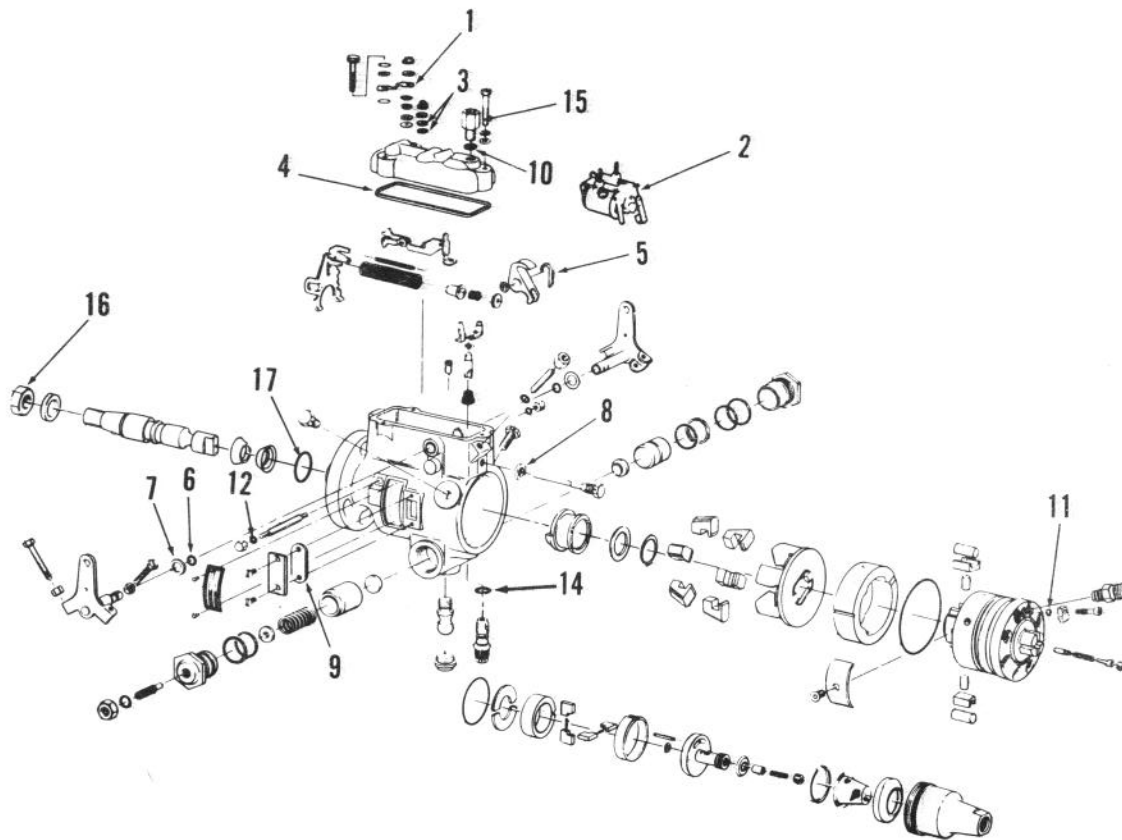


21A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Pump, Injection - Fuel (See Separate Page for Components)	19			Washer, Shim - Injection Nozzle (Use as Required)
	147-0461-03	1	12 Volt DC Sets		147-0617	1	0.80mm
	147-0461-10	1	24 Volt DC Sets		147-0618	1	0.84mm
2	520-2403	3	Stud, Pump - Injection (M8)		147-0619	1	0.88mm
3	526-2106	3	Washer, Flat (M8)		147-0620	1	0.92mm
4	750-1006	3	Nut, Hex (M8)		147-0621	1	0.96mm
5	147-0708	1	Line, Injection - Fuel (No. 1)		147-0622	1	1.00mm
6	147-0709	1	Line, Injection - Fuel (No. 2)		147-0623	1	1.04mm
7	147-0710	1	Line, Injection - Fuel (No. 3)		147-0624	1	1.08mm
8	147-0766	3	Banjo		147-0625	1	1.12mm
9	147-0700	3	Injector, Fuel (Includes Seal)		147-0626	1	1.16mm
10	147-0436	3	Seal, Injector		147-0627	1	1.20mm
11	147-0767	6	Washer		147-0628	1	1.24mm
12	502-0733	1	Connector		147-0629	1	1.28mm
13	502-0057	1	Tee, Pipe - Special		147-0630	1	1.32mm
14	147-0780	3	Nut, Hex (M19)		147-0631	1	1.36mm
15	147-0647	3	Tip, Nozzle		147-0632	1	1.40mm
16	147-0707	1	Clamp, Line - Fuel		147-0633	1	1.44mm
17	147-0765	3	Screw, Hollow		147-0634	1	1.48mm
18	502-0020	1	Elbow, Street - 90° (1/8") Fuel Injector Return Line		147-0635	1	1.52mm
					147-0636	1	1.56mm
					147-0637	1	1.60mm
					147-0638	1	1.64mm
					147-0639	1	1.68mm
					147-0640	1	1.72mm
					147-0641	1	1.76mm
					147-0642	1	1.80mm
					147-0643	1	1.84mm
					147-0644	1	1.88mm
					147-0645	1	1.92mm
					147-0646	1	1.96mm



# Fuel Injection Pump Components

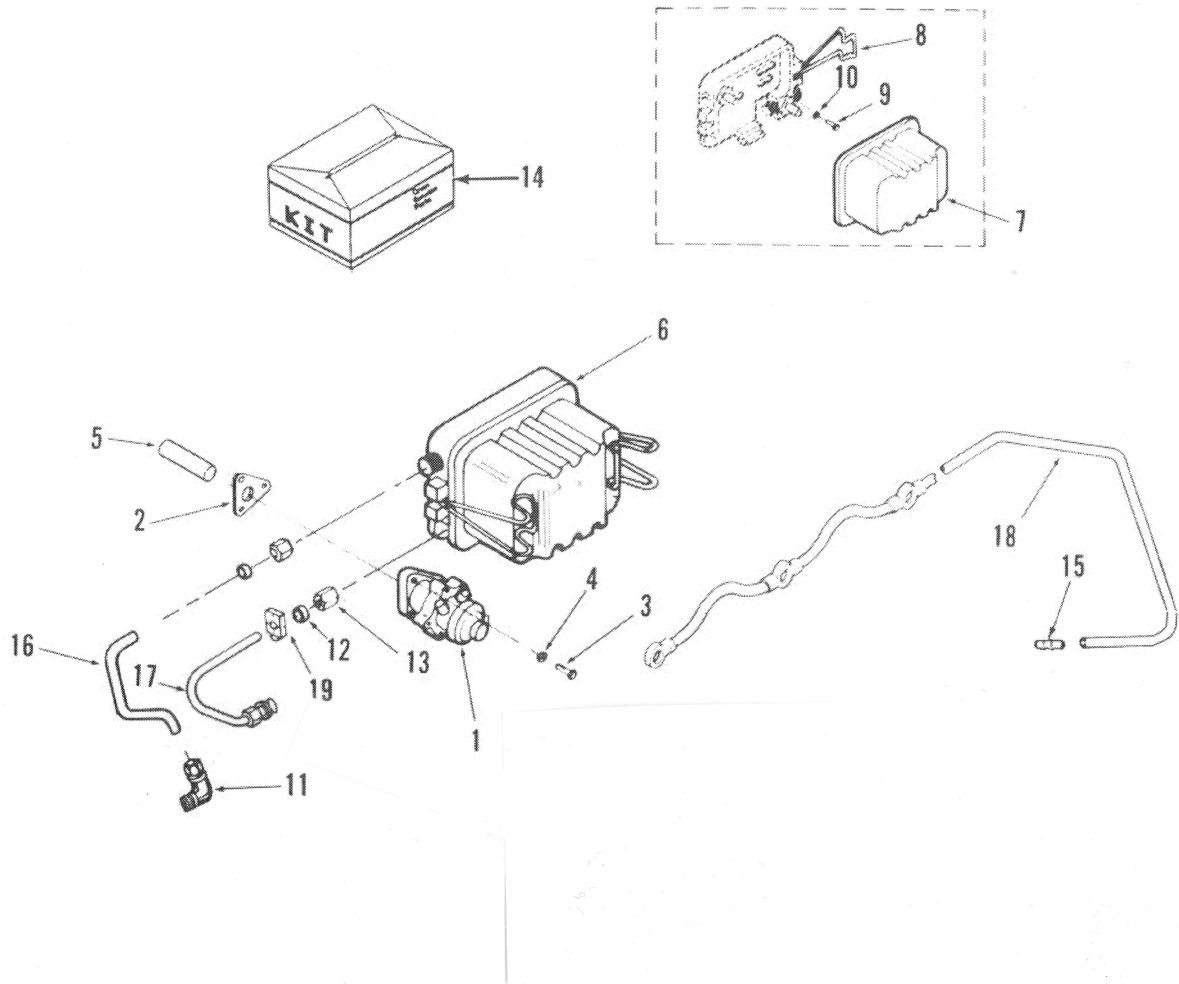


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REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Pump, Injection - Fuel (Complete)	8	147-0586	1	Washer, Stud - Guide
	147-0461-03	1	12 Volt DC Sets	9	147-0585	1	Gasket, Cover - Timing Line
	147-0461-10	1	24 Volt DC Sets	10	147-0584	1	Seal, Connector - Return Line
1	147-0592	1	Strap, Grounding - Terminal	11	147-0583	1	Seal, Plate - Locking
2			Kit, Solenoid and Frame	12	147-0582	2	Seal, Shaft - Pivot
	147-0593	1	12 Volt DC	14	147-0580	1	Seal, Screw - Head Locating
	147-0703	1	24 Volt DC	15	147-0579	1	Connector, Line - Return
3	147-0591	2	Washer, Insulating - Terminal	16	147-0578	1	Nut, Shaft - Drive
4	147-0590	1	Gasket, Cover - Governor	17	509-0265	1	Seal, Tube - Pilot
5	147-0589	1	Clip, Retaining - Shaft				
6	147-0588	2	Seal, Shaft - Throttle				
7	147-0587	2	Washer, Seal - Throttle Shaft				

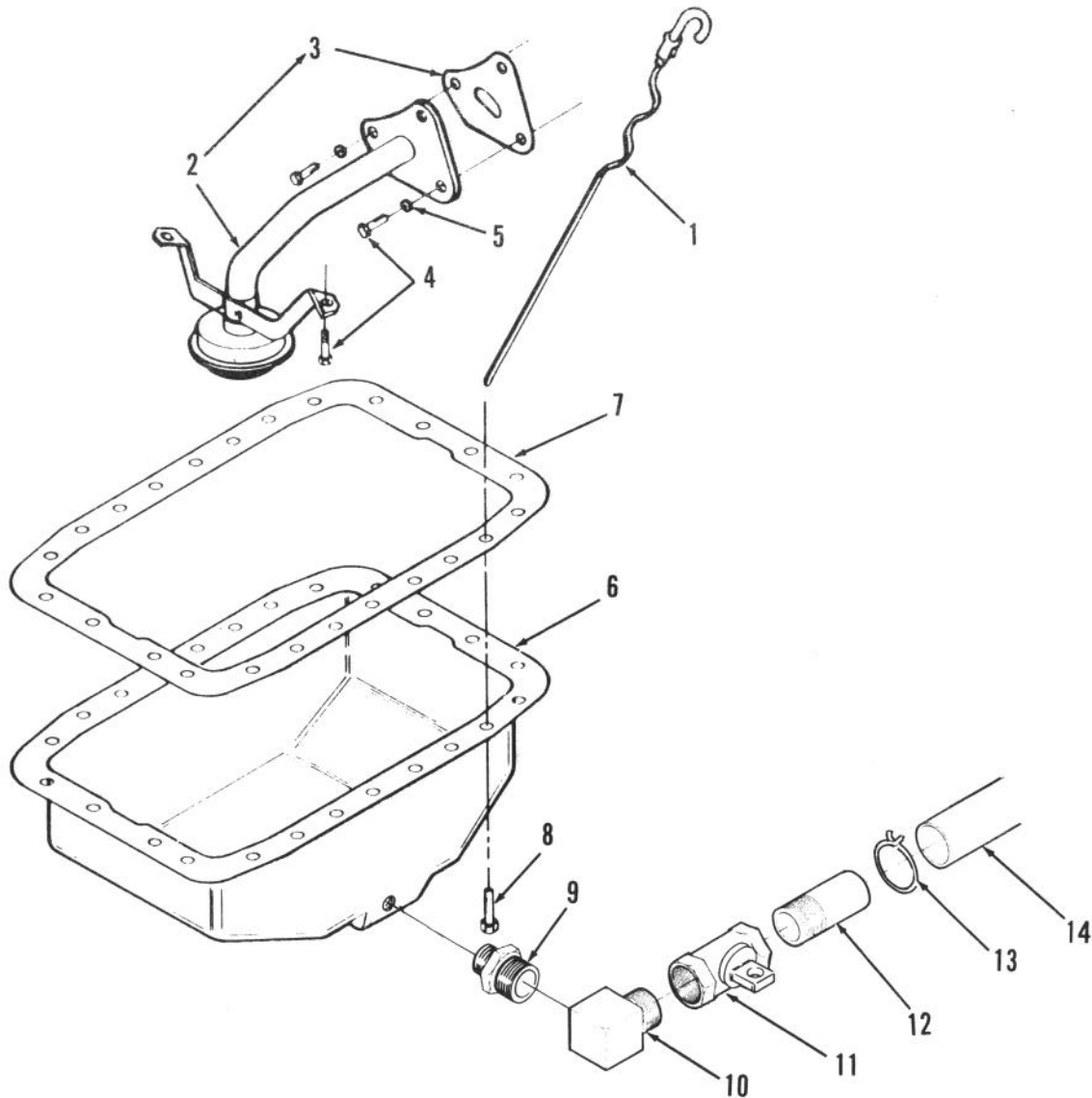
NOTE: For component parts not listed contact manufacturer shown on nameplate.

## Fuel System



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	149-2067	1	Kit, Pump - Fuel Transfer (Includes Mounting Gasket)	10	740-1008	2	Washer, Flat (M10)
2	149-1728	1	Gasket, Pump - Fuel Transfer	11	502-0774	1	Elbow, Outlet - Fuel Pump (Includes Sleeve and Nut)
3	718-1021	3	Screw, Cap - Hex Head (M6 x 20mm)	12	502-0768	2	Sleeve, Line - Flareless
4	740-1004	3	Washer, Flat (M6)	13	502-0769	2	Nut, Line - Flareless
5	149-1732	1	Pushrod, Pump - Fuel Transfer	14	149-2069	1	Repair Package - Fuel Pump
6	149-1759	1	Filter Assembly (Includes Filter, Base, Clips and Grommet)	15	502-0830	1	Connector (Includes Sleeve and Nut)
7	149-1758	1	Filter, Fuel	16	149-1772	1	Line, Fuel
8	149-1771	2	Clip, Filter - Fuel	17	149-1889	1	Line, Fuel
9	725-1074	2	Screw, Cap - Hex Head (M10 x 20mm)	18	147-0713	1	Tube, Nozzle - Leak Off
				19	149-1800	1	Grommet, Line - Fuel

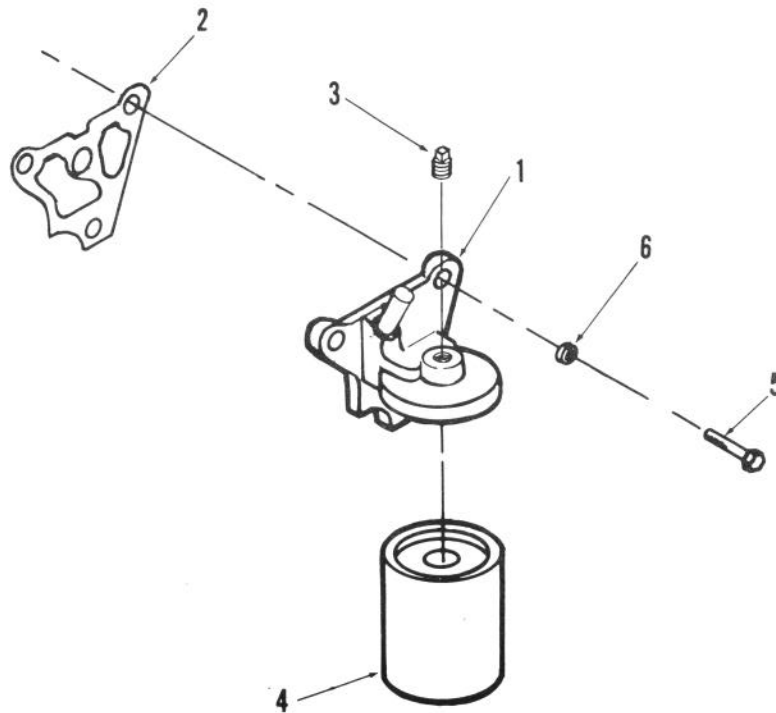
# Oil Pan



774A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	123-1711-04	1	Indicator, Level - Oil	7	102-1128	1	Gasket, Pan - Oil
2	120-1111	1	Kit, Oil Pickup (Includes Gasket)	8	815-0547	24	Screw, Cap - Hex Head (Includes Washer) M8 x 20mm
3	120-0917	1	Gasket, Pickup - Oil	9	102-1237	1	Adapter, Drain - Oil
4			Screw, Cap - Hex Head	10	505-0050	1	Elbow, Street - 90° (1/2")
	718-1044	2	M8 x 60mm	11	504-0011	1	Valve, Shutoff
	718-1036	2	M8 x 20mm	12	505-0185	1	Nipple, Half (1/2")
5	740-1006	4	Washer, Flat (M8)	13	503-0197	1	Clamp, Hose
6	102-1260	1	Pan, Oil (Includes Plug and Gasket)	14	503-1195	1	Hose, Drain - Oil (3/4")

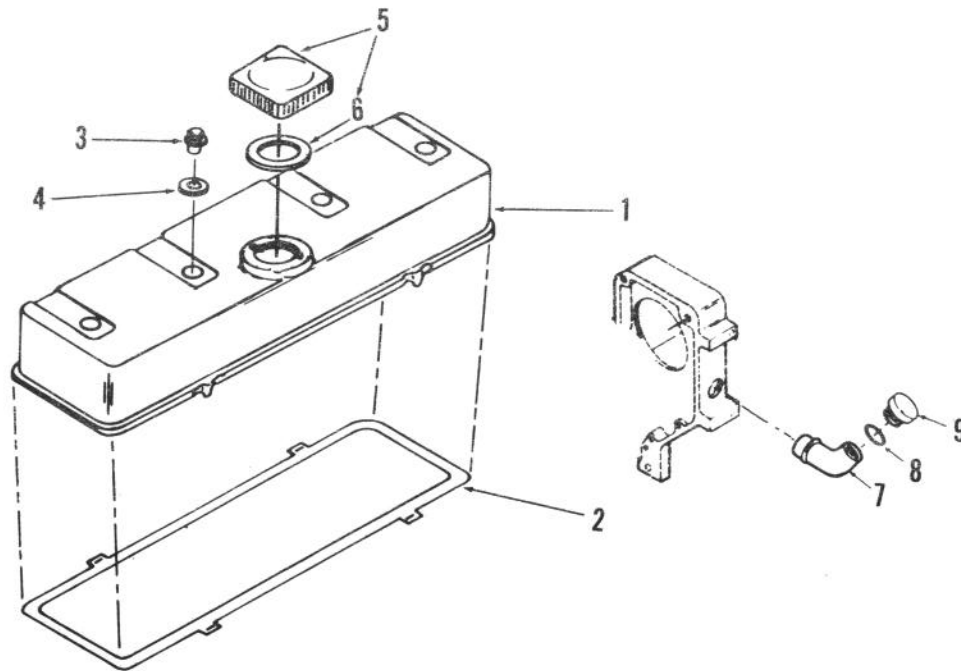
## Oil Filter



479A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	122-0632	1	Adapter Kit, Oil Filter (Includes Gasket)	4	122-0602	1	Filter, Oil
2	122-0635	1	Gasket	5	718-1037	3	Screw, Cap - Hex Head (M8 x 25mm)
3	505-0274	1	Plug, Hex (1/8")	6	526-2108	3	Washer, Flat (M8)

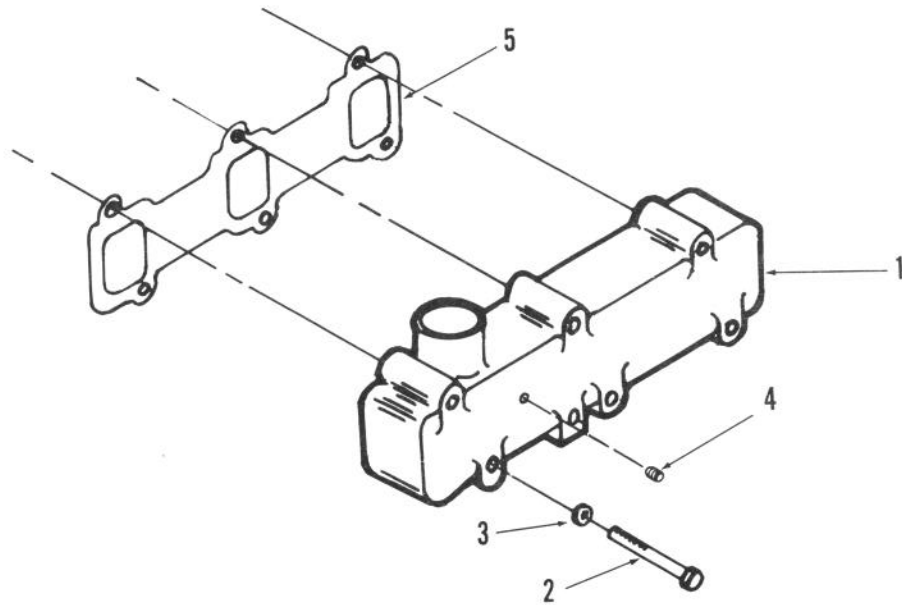
# Oil Fill



287A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	115-0344	1	Cover, Rocker	6	123-1518	1	Gasket, Cap - Oil Fill
2	115-0309	1	Gasket, Cover - Rocker	7	123-1558	1	Tube, Fill - Oil
3	115-0320	3	Capnut, Cover - Rocker	8	509-0142	1	Seal, O-Ring
4	115-0232	3	Gasket, Capnut	9	123-1647	1	Cap, Fill - Oil
5	123-1605	1	Cap, Fill - Oil (Includes Gasket)				

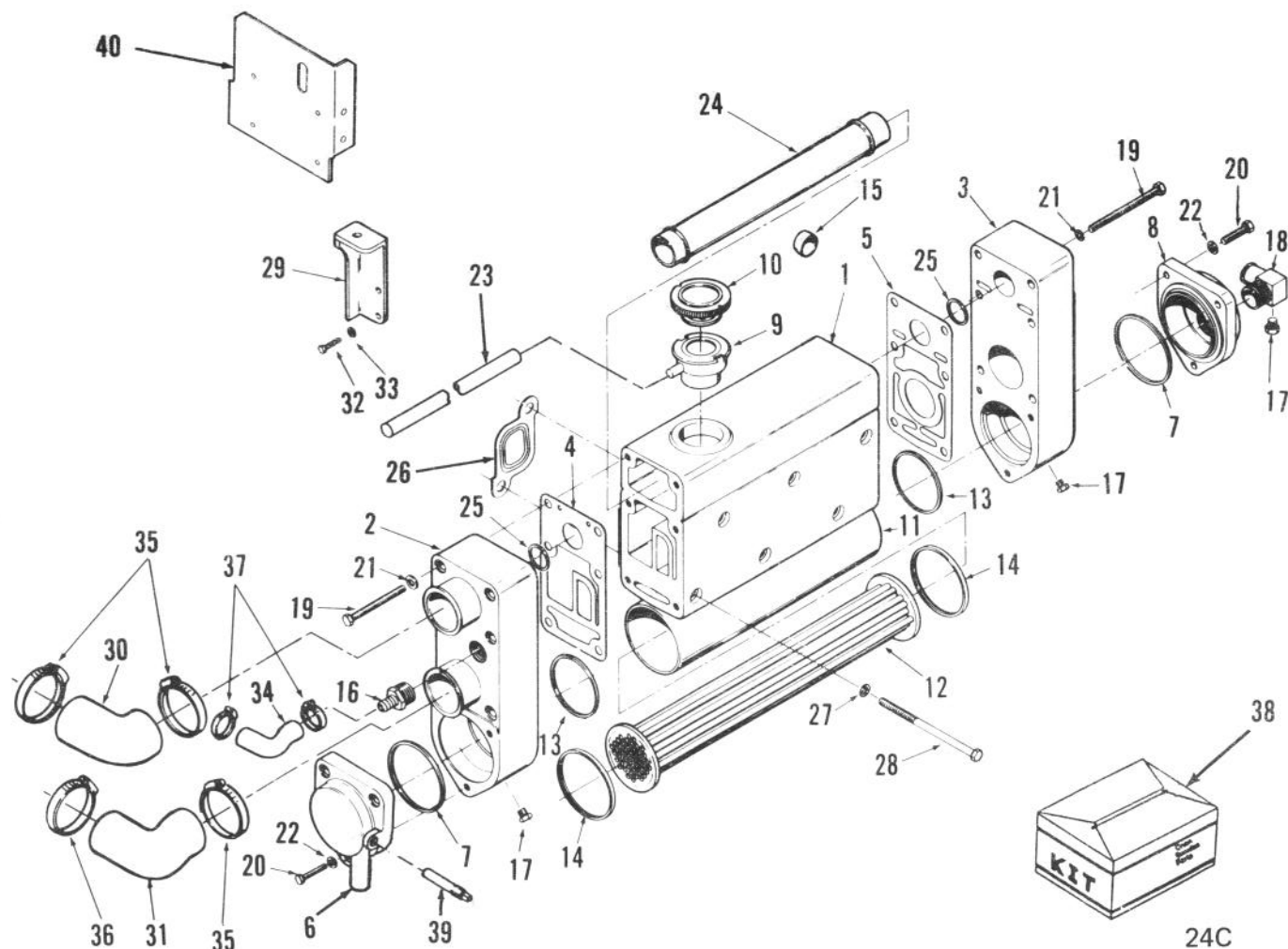
## Intake Manifold



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	154-2370	1	Manifold, Intake
2	718-1801	6	Screw, Cap - Hex Head (M8 x 85mm)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
3	740-1006	6	Washer, Flat (M8)
4	505-0274	1	Plug, Pipe
5	154-2385	1	Gasket, Manifold

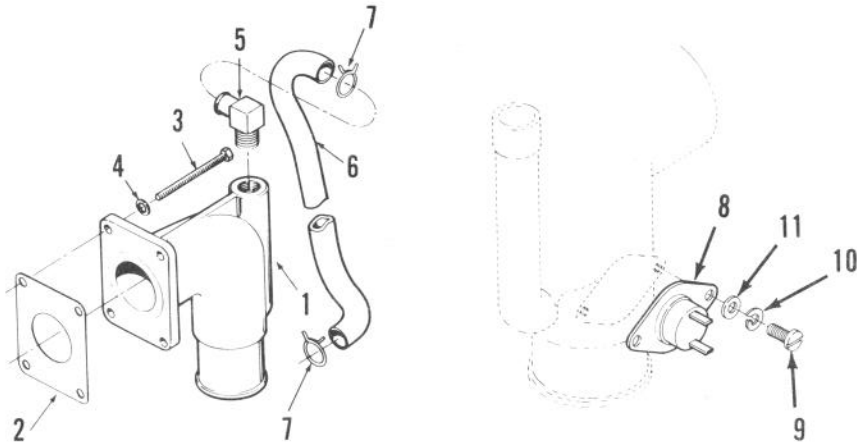
# Exhaust Manifold



REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	154-2453	1	Manifold, Exhaust	21	740-1006	8	Washer, Flat (M8)
2	154-2347	1	Cap, End - Manifold (Front)	22	740-1004	6	Washer, Flat (M6)
3	154-2348	1	Cap, End - Manifold (Rear)	23	503-1262	1	Hose, Overflow
4	154-2353	1	Gasket, Manifold - Front Cap	24	154-2482	1	Tube, Flow - Coolant
5	154-2352	1	Gasket, Manifold - Rear Cap	25	509-0190	2	Seal, O-Ring - Coolant Flow Tube
6	154-2668	1	Cover, Exchanger - Heat (Front)	26	154-2162	3	Gasket, Manifold - Exhaust
	154-2349	1	Accepts Zinc Pencil	27	740-1802	6	Washer, Flat (M8)
7	509-0179	2	Does Not Accept Zinc Pencil	28	806-2001	6	Screw, Cap - Counter Bore
			Seal, O-Ring - Heat Exchanger Cover	29	403-2140	1	Bracket, Lifting
8	154-2350	1	Cover, Exchanger - Heat (Rear)	30	503-1123	1	Hose, Coolant - Upper
9	130-2304	1	Neck, Filler	31	503-1165	1	Hose, Coolant - Lower
10	130-2248	1	Cap, Pressure	32	718-1054	2	Screw, Cap - Hex Head (M10 x 25mm)
11	130-2334	1	Shell, Exchanger - Heat	33	740-1008	2	Washer, Flat (M10)
12	130-2387	1	Core, Exchanger - Heat	34	503-1124	1	Hose, Coolant - Manifold
13	130-2147	2	Gasket, Shell - Heat Exchanger	35	503-1141	3	Clamp, Hose (#32)
14	130-2130	2	Gasket, Exchanger - Heat	36	503-1140	1	Clamp, Hose (#28)
15	517-0142	2	Plug, Cup	37	503-1137	2	Clamp, Hose (#16)
16	502-0836	1	Adapter, Pipe to Hose	38	168-0172	1	Kit, Gasket - Heat Exchanger
17	502-0153	3	Plug, Pipe (1/4")	39	130-3023	1	Pencil, Zinc
18	502-0881	1	Elbow, 90°	40	403-2128	1	Bracket, Lifting
19	720-1044	8	Screw, Cap - Hex Head (M8 x 60mm)				
20	718-1022	6	Screw, Cap - Hex Head (M6 x 25mm)				



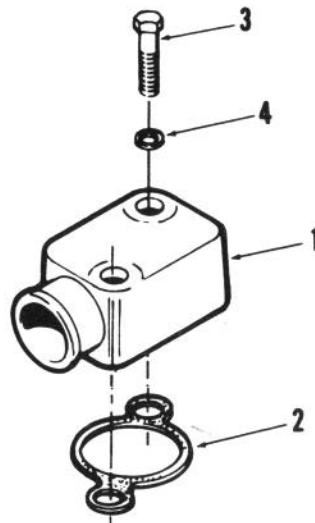
## Exhaust Elbow



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	154-2409	1	Elbow, Exhaust
2	154-2373	1	Gasket, Elbow - Exhaust
3	720-1047	4	Screw, Cap - Hex Head (M8 x 75mm)
4	740-1006	4	Washer, Flat (M8)
5	502-0881	1	Elbow, 90°
6	503-1242	1	Hose, Cooling - Exhaust
7	503-1138	2	Clamp, Hose

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
8	309-0484	1	Switch, Exhaust - High Temperature - Sets with Control Gauges (S3)
9	822-3041	2	Screw, Machine - Pan Head (M3 x 5mm)
10	850-0020	2	Washer, Lock - Spring (#6)
11	526-0003	2	Washer, Flat (#8)

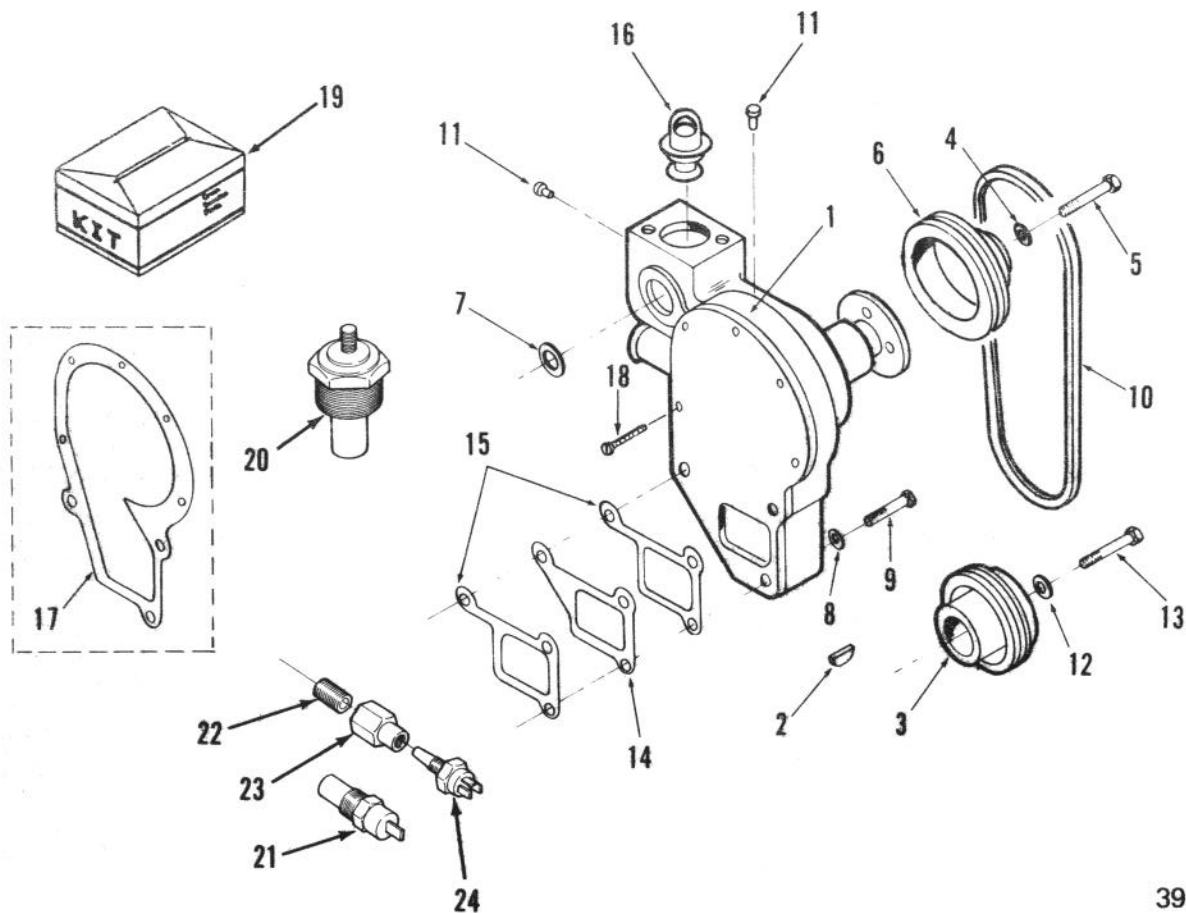
## Coolant Outlet Connector



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	309-0518	1	Cover Kit, Thermostat (Includes Gasket)
2	309-0417	1	Gasket, Cover - Thermostat
3	718-1048	2	Screw, Cap - Hex Head (M8 x 80 MM)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
4	740-1006	2	Washer (M8) Sets Without Belt Guard Bracket
	850-2008	2	Sets With Belt Guard Bracket

# Coolant Pump



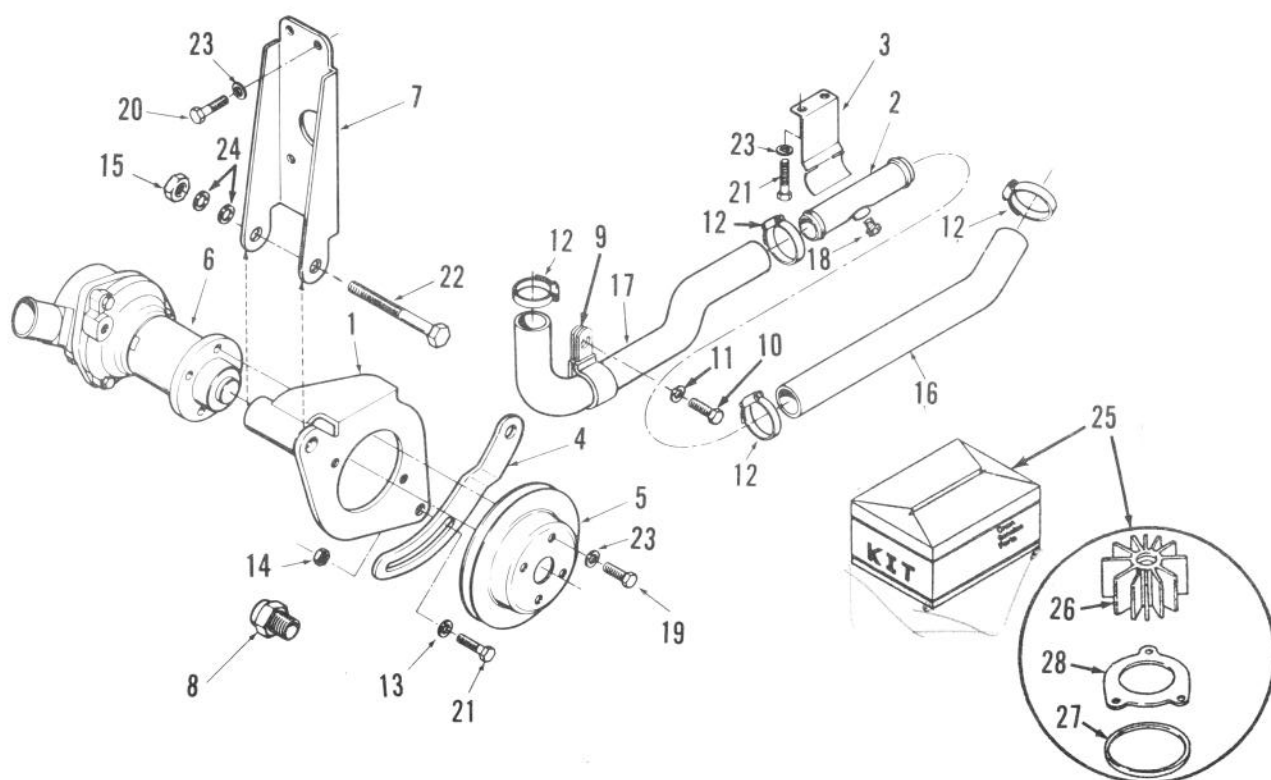
391A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	131-0350	1	Kit, Pump - Coolant (Includes Mounting Gaskets)	17	131-0334	1	Gasket, Backplate - Coolant Pump
2	515-0245	1	Key, Pulley - Crankshaft	18	815-0612	5	Screw, Countersunk - Flat Head - Torque Drive (Special)
3	104-1488	1	Pulley, Crankshaft	19	541-0214-02	1	Kit, Repair - Coolant Pump (Includes Gaskets, Seal, Hub, Bearing, Impeller and Backplate Mounting Screws)
4	740-1006	4	Washer, Flat (M8)	20	193-0318	1	#Sender, Water Temperature (E2)
5	718-1035	4	Screw, Cap - Hex Head (M8 x 16mm)	21	309-0437	1	Switch, High Engine Coolant Temperature (S2)
6	131-0341	1	Pulley, Pump - Coolant	22	505-0306	1	#Nipple, Close (3/8" x 1-1/4")
7	509-0264	1	Seal, O-Ring	23	505-0153	1	#Coupling, Reducer (3/8" to 1/4")
8	740-1006	3	Washer, Flat (M8)	24	193-0322	1	#Sender, Low Coolant Level (S5)
9	718-1044	3	Screw, Cap - Hex Head (M8 x 60mm)				
10	511-0147-14	1	Belt, Pump - Coolant				
11	502-0775	2	*Plug, Pipe (3/8")				
12	526-0283	1	Washer, Flat (M8)				
13	720-1123	1	Screw, Cap - Hex Head (M16 x 60mm)				
14	131-0324	1	Spacer, Pump - Coolant				
15	131-0294	2	Gasket, Mounting - Coolant Pump				
16	309-0458	1	Kit, Thermostat (Includes Gasket)				

\* - Parts Used on Sets Without Control Mounted DC Gauges.

# - Parts Used on Sets With Control Mounted DC Gauges.

# Raw Water Pump

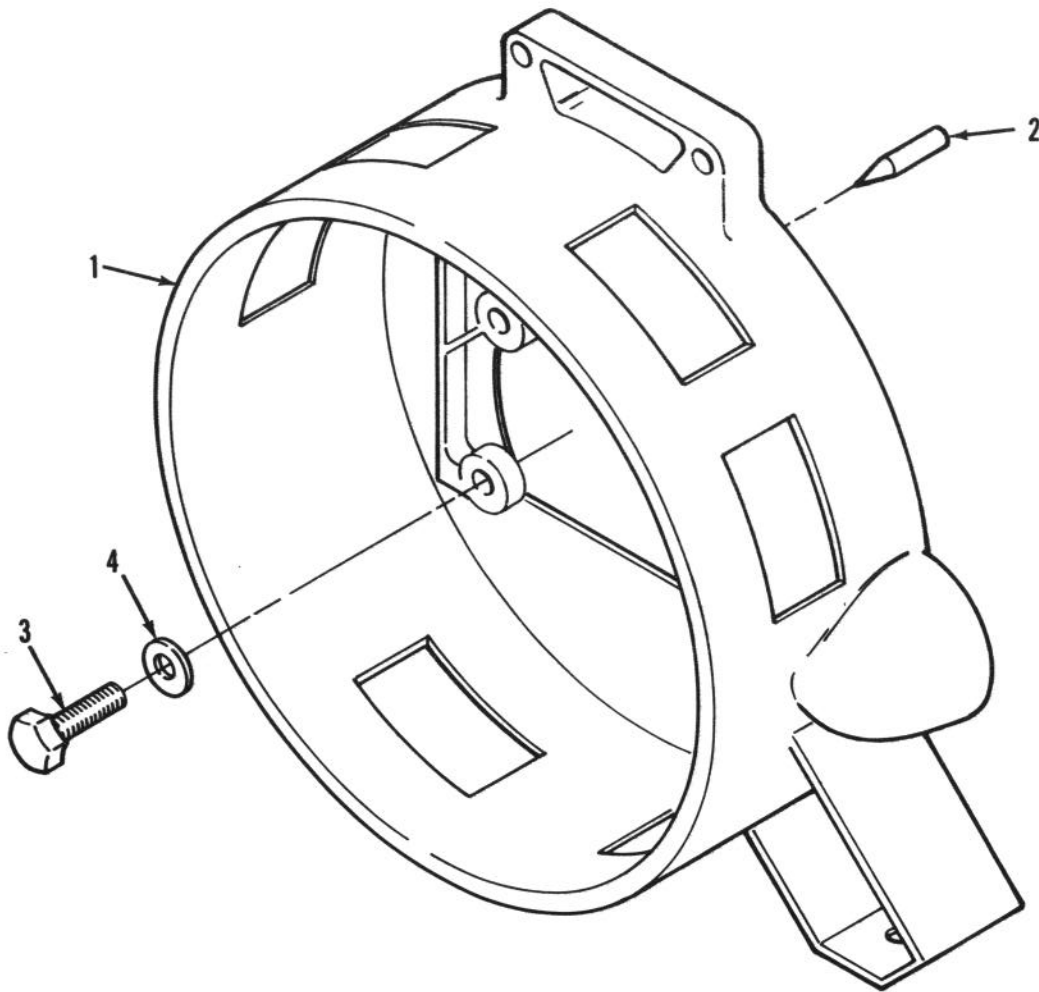


13A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	130-2140	1	Bracket, Pump - Water	21	718-1037	5	Screw, Cap - Hex Head (M8 x 25mm)
2	130-2242	1	Tube, Water - Raw	22	800-2100	1	Screw, Cap - Hex Head (M10 x 100mm)
3	130-2259	1	Bracket, Tube - Raw Water	23	740-1006	10	Washer, Flat (M8)
4	130-2292	1	Strap, Adjusting	24	740-1008	2	Washer, Flat (M10)
5	131-0342	1	Pulley, Pump - Water	25	132-0328	1	Kit, Service - Raw Water Pump Major Repair Kit (Includes Impeller, Gasket, O-Ring, Cam Seat and Seal Assembly, Wear Plate and Bearing)
6	132-0275	1	Pump Assembly, Raw Water		132-0276	1	Minor Repair Kit (Includes Seat and Seal Assembly and Parts Marked *)
7	191-1332	1	Bracket, Mounting - Water Pump		132-0329	1	Shaft Kit
8	502-0836	1	Adapter, Pipe to Hose	26	132-0317	1	*Impeller
9	332-2898	1	Clamp, Loop	27	132-0293	1	*Gasket, Ring
10	800-2110	1	Screw, Cap - Hex Head (M12 x 20mm)	28	132-0294	1	*Gasket, Cover
11	853-2012	1	Washer, Lock - ET (M12)				
12	503-1138	4	Clamp, Hose (#20)				
13	526-2106	1	Washer, Flat (M8)				
14	750-1006	1	Nut, Hex (M8)				
15	750-1008	1	Nut, Hex (M10)				
16	503-1223	1	Hose, Raw Water				
17	503-1591	1	Hose, Raw Water				
18	505-0846	1	Plug, Pipe - Hex (1/4")				
19	718-1034	4	Screw, Cap - Hex Head (M8 x 14mm)				
20	718-1036	2	Screw, Cap - Hex Head (M8 x 20mm)				

\* - Parts Included in 132-0276 Water Pump Service Kit.

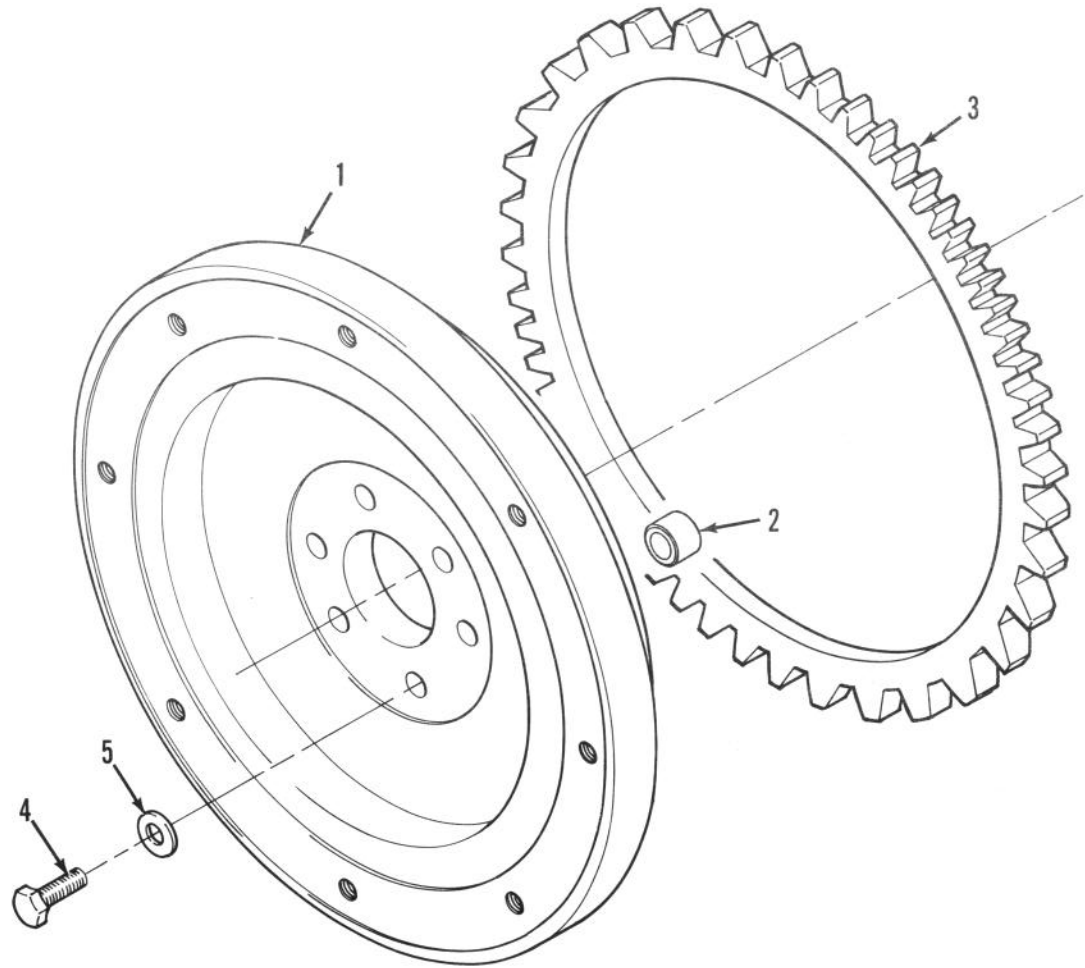
## Generator Adapter



32A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	231-0267-01	1	Adapter Assembly, Generator (Includes Timing Indicator)	3	718-1078	6	Screw, Cap - Hex Head (M12 x 50mm)
2	160-1292	1	Indicator, Timing	4	740-1801	6	Washer, Flat (M12)

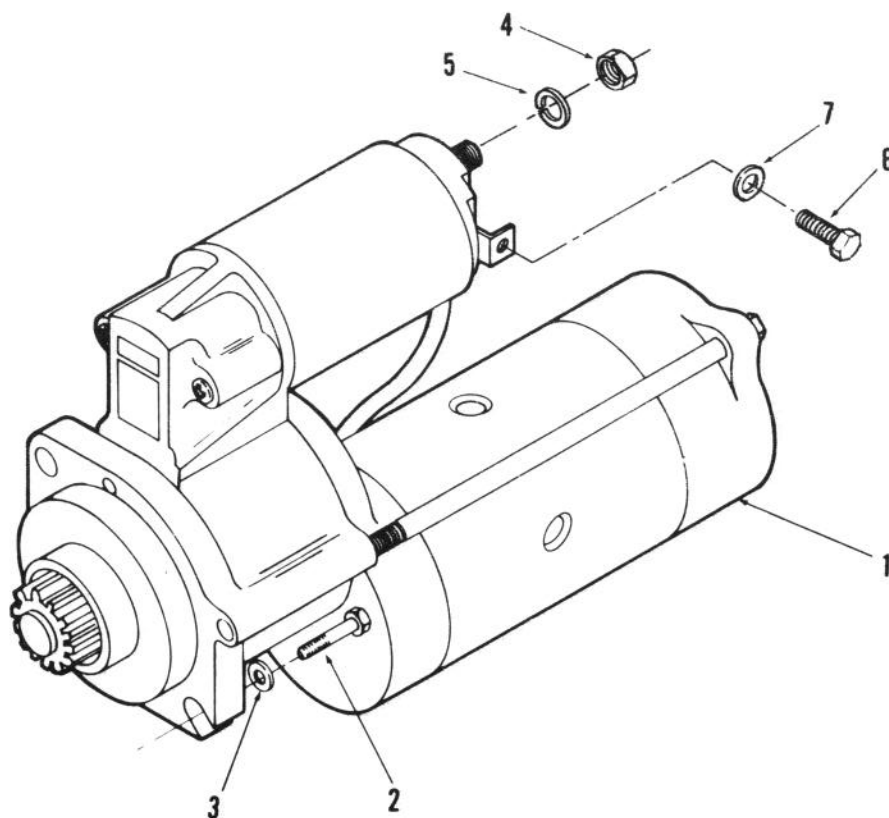
# Flywheel1



29B

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	104-1659	1	Flywheel Assembly (Includes Ring Gear and Alignment Pin)	4	720-1804	6	Screw, Cap - Flange Hex Head (M10 x 38mm)
2	104-1690	1	Pin, Alignment	5	740-1008	6	Washer, Flat (M10)
3	104-1169	1	Gear, Ring				

# Starter

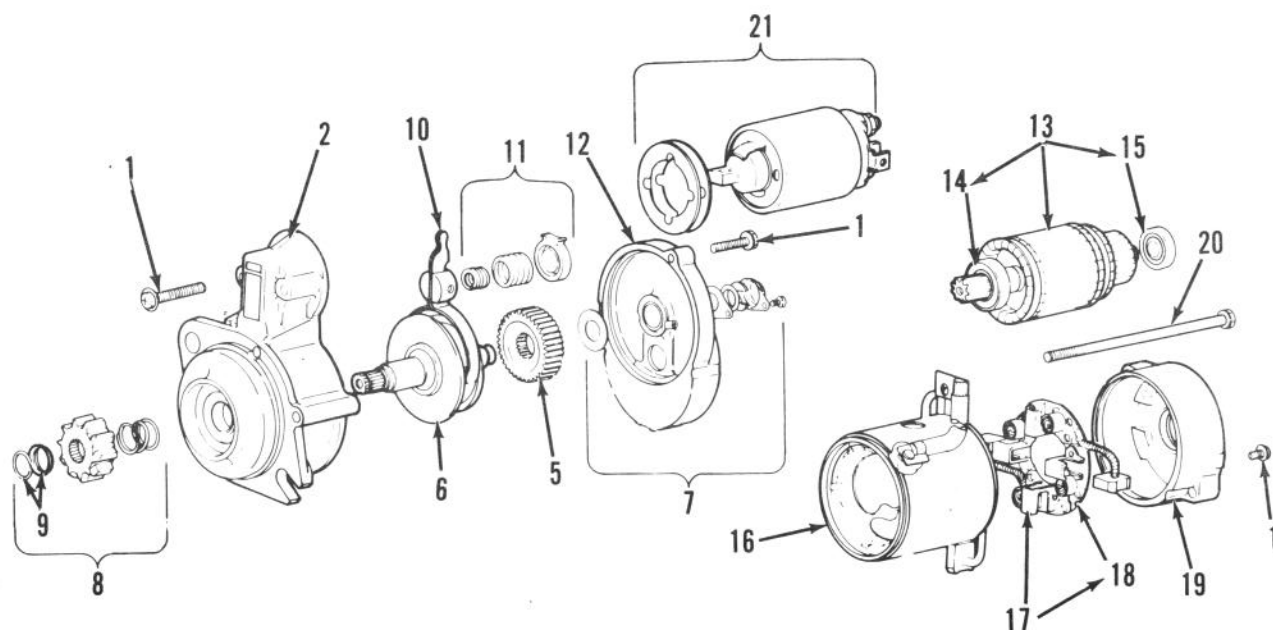


204A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Starter (Includes Switch Terminal Hardware) (See Separate Page for Components)
	191-1394	1	12 Volt DC
	191-1550	1	24 Volt DC
2	720-1806	2	Screw, Cap - Flanged Hex Head (M12 x 30mm)
3	740-1010	2	Washer, Flat (M12)

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
4	860-2008	1	Nut, Hex (M8) B+ Terminal
5	850-2008	1	Washer, Lock - Spring (M8) B+ Terminal
6	718-1002	1	Screw, Cap - Hex Head (M5 x 8mm) Solenoid Terminal
7	850-2005	1	Washer, Lock - Spring (M5) Solenoid Terminal

# Starter Components

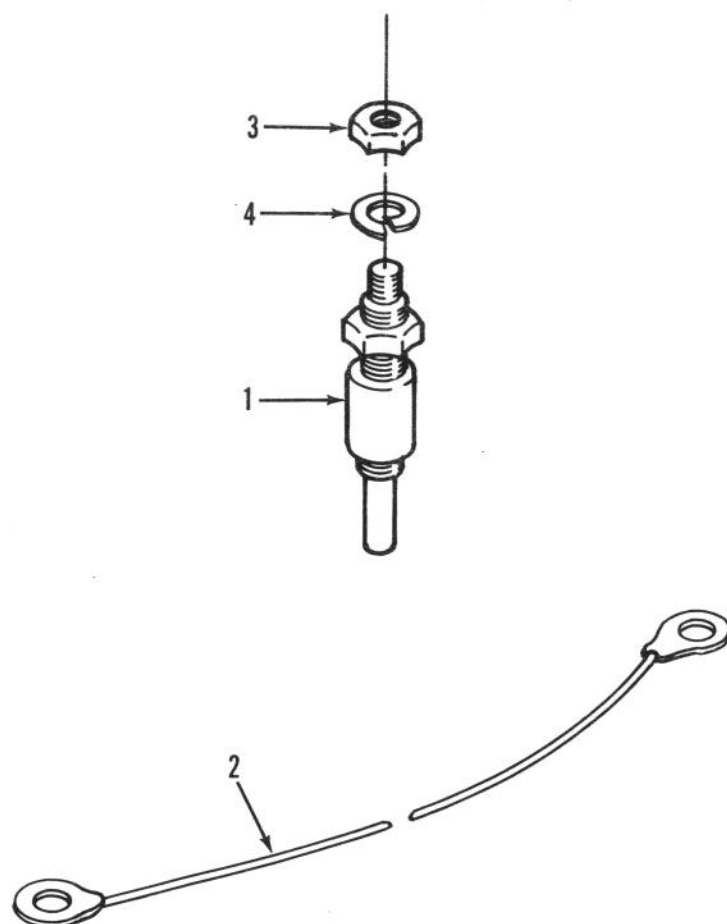


517A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Starter (Complete)	13			Armature Assembly (Includes Bearings)
	191-1394	1	12 Volt DC		191-1438	1	12 Volt DC
	191-1550	1	24 Volt DC		191-1606	1	24 Volt DC
1	191-1450	1	Screw Set	14	191-1437	1	Bearing, Center
2			Bracket Assembly, Front (Includes Bearing)	15	191-1436	1	Bearing, Rear
	191-1449	1	12 Volt DC	16			Yoke Assembly (Includes Pole Shoes, Field Coil and Positive Brushes)
	191-1605	1	24 Volt DC		191-1435	1	12 Volt DC
5	191-1446	1	Gear		191-1607	1	24 Volt DC
6	191-1445	1	Clutch	17			Holder, Brush (Includes Negative Brushes)
7	191-1444	1	Cover Set (Includes Cover, Plate, Washers, Snap Ring and Screws)		191-1434	1	12 Volt DC
8	191-1443	1	Pinion Set (Includes Pinion, Spring and Stopper Set)		191-1608	1	24 Volt DC
9	191-1442	1	Stopper Set (Includes Stopper and Ring)	18	191-1433	4	Spring, Brush
10	191-1441	1	Lever Assembly	19	191-1432	1	Bracket, Rear
11	191-1440	1	Spring Set	20	191-1431	1	Bolt Set
12	191-1439	1	Bracket Assembly, Center	21			Switch Assembly
					191-1430	1	12 Volt DC
					191-1609	1	24 Volt DC



# Glow Plug

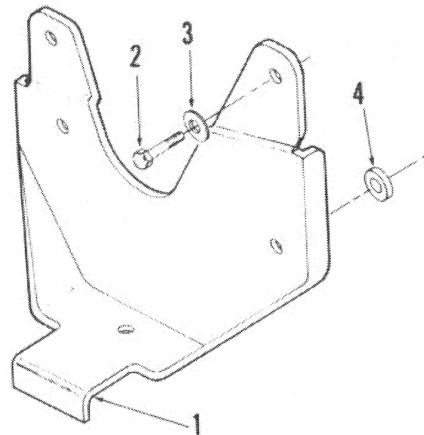


28A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	333-0220	3	Plug, Glow
2	336-4131	2	Lead, Plug - Glow

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
3	750-1002	3	Nut, Hex (M5)
4	850-2005	3	Washer, Lock - Spring (M5)

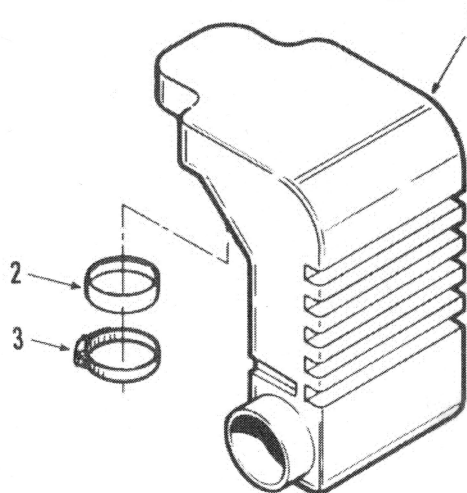
## Front Engine Mount



296A

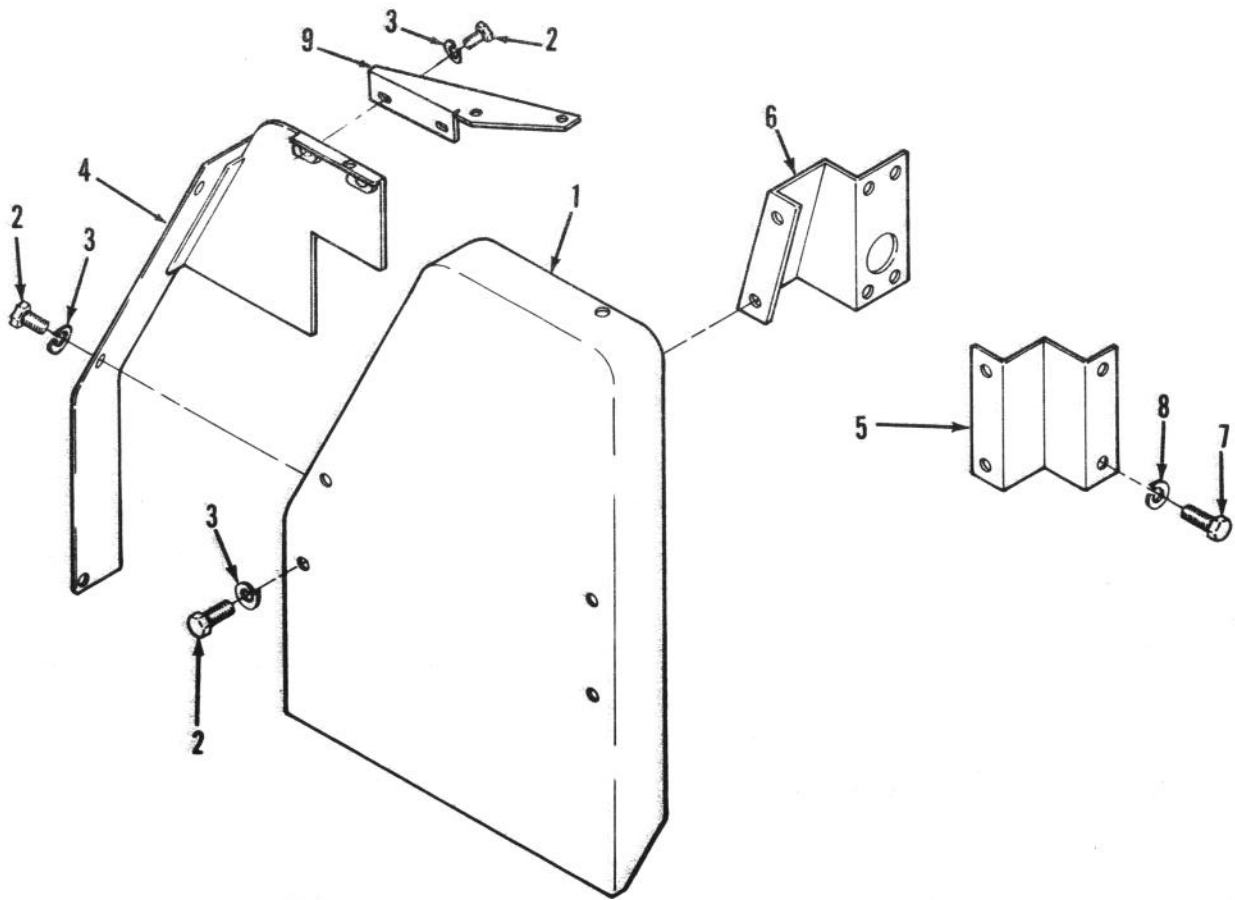
REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	403-2664	1	Bracket, Mount	3	740-1010	4	Washer, Flat (M12)
2	718-1086	2	Screw, Cap - Hex Head M12 x 90mm (Top)	4	403-1932	2	Spacer, Mounting - Bracket
	718-1802	2	M12 x 95mm (Bottom)				

## Air Silencer



REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	140-2020	1	Silencer, Intake - Air
2	140-1857	1	Sleeve
3	503-0648	1	Clamp

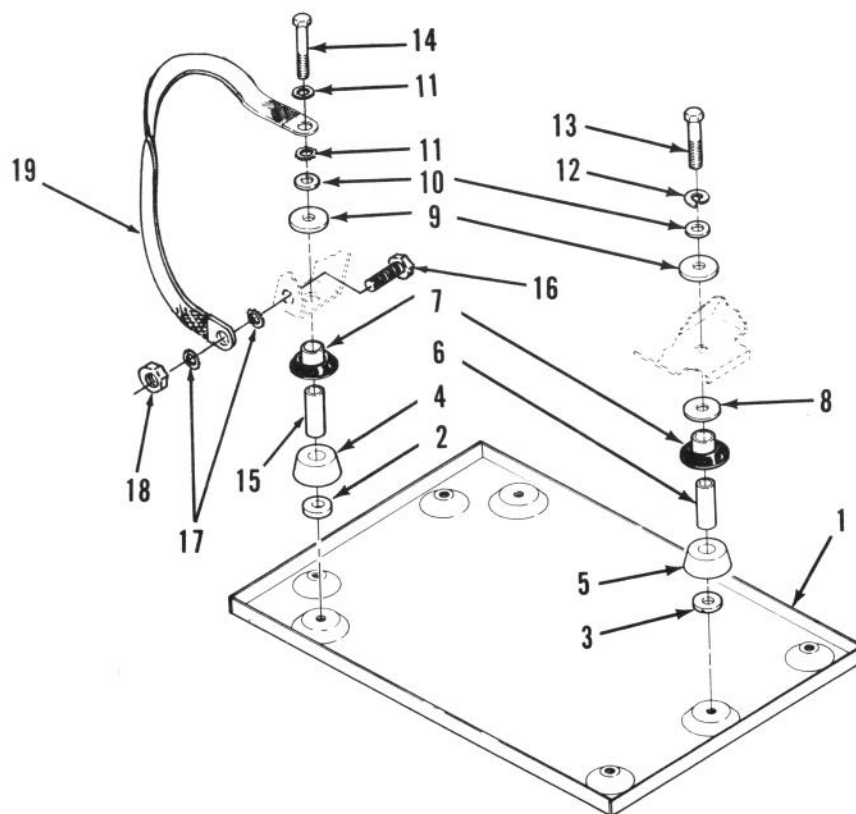
# Belt Guard



222A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	130-3008	1	Panel, Front	6	130-2202	1	Bracket, Guard - Pulley (Right Hand)
2	800-2029	10	Screw, Cap - Hex Head (M6 x 12mm)	7	800-2056	2	Screw, Cap - Hex Head (M8 x 16mm)
3	850-2006	10	Washer, Lock - Spring (M6)	8	850-2008	2	Washer, Lock - Spring (M8)
4	130-3007	1	Panel, Side	9	130-3004	1	Bracket, Guard - Belt
5	130-2201	1	Bracket, Guard - Pulley (Left Hand)				

## Drip Pan and Mounting Cushions



776A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	403-2450	1	Pan, Drip
2	526-0128	1	Washer, Flat (15/64" ID x 1-1/2" OD x 1/4" Thk)
3	402-0503	1	*Spacer (Prior to 4/1/87)
4	402-0287	2	Cushion, Mounting (Rear)
5	402-0285	1	Cushion, Mounting (Front)
6	402-0290	1	Bushing (Front)
7			+Cup, Retaining
	402-0584	3	Prior to 4/1/87
	402-0584	2	Begin 4/1/87
8	526-0286	1	Washer, Flat (1-1/8" ID x 1-3/4" OD x 3/16" Thk)
9	402-0282	3	Cushion, Mounting
10	526-0014	3	Washer, Flat (7/16")
11			Washer (Rear Mounts)
	856-0012	2	Lock - EIT (7/16") Ground Strap Side (Right Hand)
	850-0055	1	Lock - Spring (7/16")
12	850-0055	1	Washer, Lock - Spring (7/16")
13	800-0082	1	*Screw, Cap - Hex Head (7/16-14 x 3-3/4") (Prior to 4/1/87)

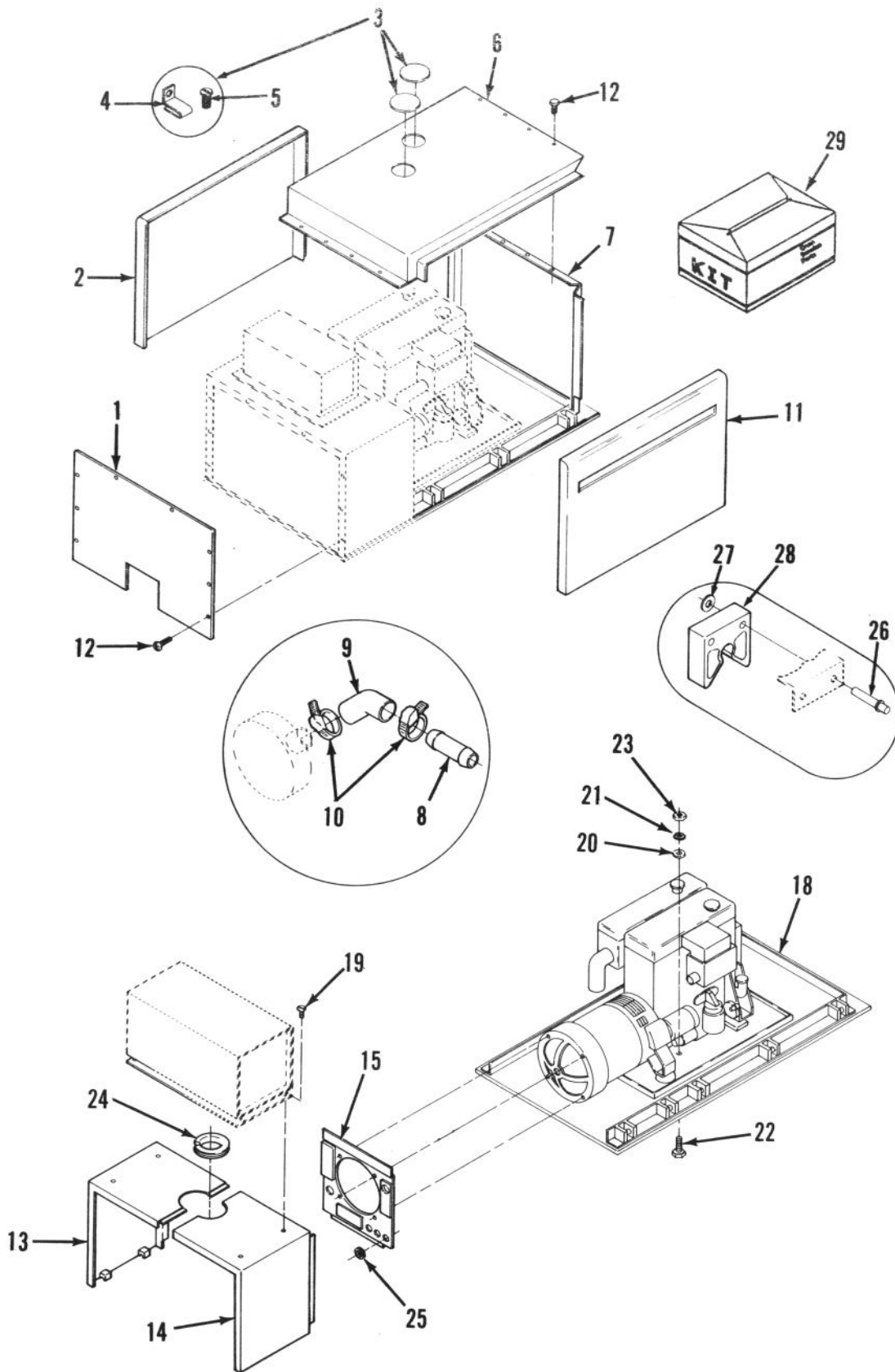
REF NO.	PART NO.	QTY USED	PART DESCRIPTION
14			#Screw, Cap - Hex Head 7/16-14 x 3-1/4"
	800-0080	2	Prior to 4/1/87
	800-0080	3	Begin 4/1/87
	800-0081	3	7/16-14 x 3-1/2" - Begin 10/10/88
15	370-4028	2	Bushing (Rear)
16	800-2059	1	Screw, Cap - Hex Head (M8 x 30mm)
17	856-1008	2	Washer, Lock - EIT (5/16")
18	860-2008	1	Nut, Hex (M8)
19	337-1837	1	Strap, Ground - Engine

# - Qty. 3 used begin 1987 during Spec A; with new style drip pan.

\* - Not used with new style pan - begin 1987 during Spec A.

+ - Qty. 2 required with new pan - begin 1987 during Spec A.

# Sound Shield Housing

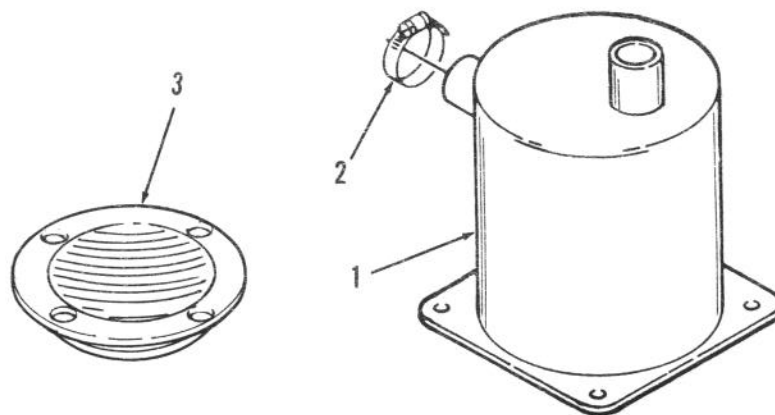


## Sound Shield Housing

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	405-3155	1	#Panel, Rear	18	405-3595	1	Base (Includes Plywood, Rails, Screws, Pins and Push Nuts)
2	405-3588	1	#Door, Hand - Left	19	821-0008	4	Screw, Head - Locking Flange (1/4-20 x 5/16")
3	405-3292	2	Cover Assembly, Access (Includes Speed Nuts, Insulation and Screws)	20	526-0322	4	Washer, Flat (1/2")
4	870-0261	6	Nut, Speed	21	856-0013	4	Washer, Lock - EIT (1/2")
5	815-0562	6	Screw, Pan Head - Cross Recessed (#10 x 5/16")	22	816-0250	4	Bolt, Carriage (1/2-13 x 2-1/2")
6	405-3589	1	#Roof	23	862-0016	4	Nut, Hex (1/2-13)
7	405-3138	1	#Panel, Front	24	508-1026	1	Edging
8	502-0874	1	Union, Hose	25	508-0055	6	Grommet
9	503-1258	1	Hose, Water	26	818-0150	18	Rivet
10	503-0107	2	Clamp, Hose	27	526-0003	18	Washer, Flat (#8)
11	405-3586	1	#Door, Hand - Right	28	405-1872	11	Clip, Door - Plastic
12	815-0573	16	Screw, Hex Washer Head - Slotted (1/4-20 x 3/4")	29	405-3566	1	Kit, Sound Shield - Field Installation
13	405-3140	1	#Panel, Generator - Left Hand				
14	405-3141	1	#Panel, Generator - Right Hand				

# - These parts include (where required) insulation, bottom edge seals, edging, door catches, door strikes, door clips, and retainer nuts.

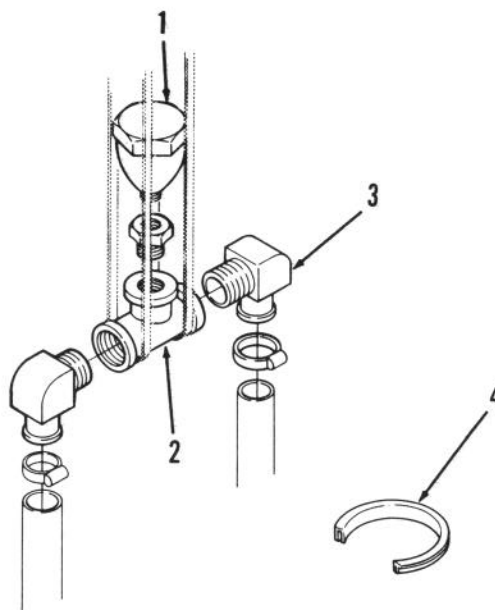
## Muffler Kit



616A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
155-2017		1	Kit, Muffler (Includes Parts Listed Below) (2-1/2" Inlet and Outlet)	1	155-2010	1	Muffler
				2	503-0354	8	Clamp
				3	155-1002	1	Strainer

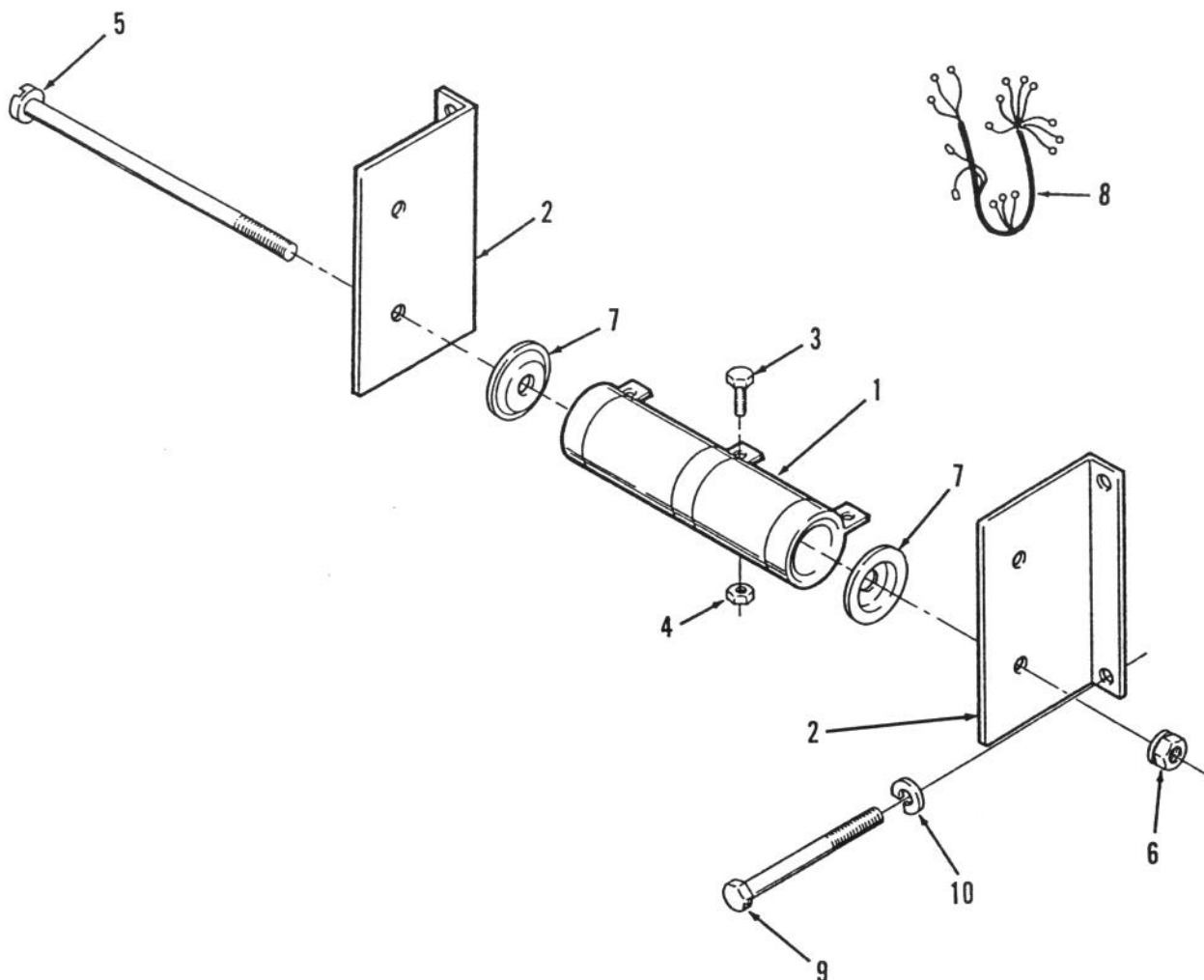
## Siphon Break Kit



764A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
155-2014		1	Kit, Siphon Break (Includes Parts Listed Below)	3	502-0881	2	Elbow, Male - 90° (Special)
1	504-0062	1	Valve, Vacuum Relief	4	508-1039	1	Edging (Knockouts)
2	502-0883	1	Tee, Pipe - Brass (3/4" x 3/4" x 1/2")				

# **Ballast Resistor (Glow Plugs - 24 Volt DC)**

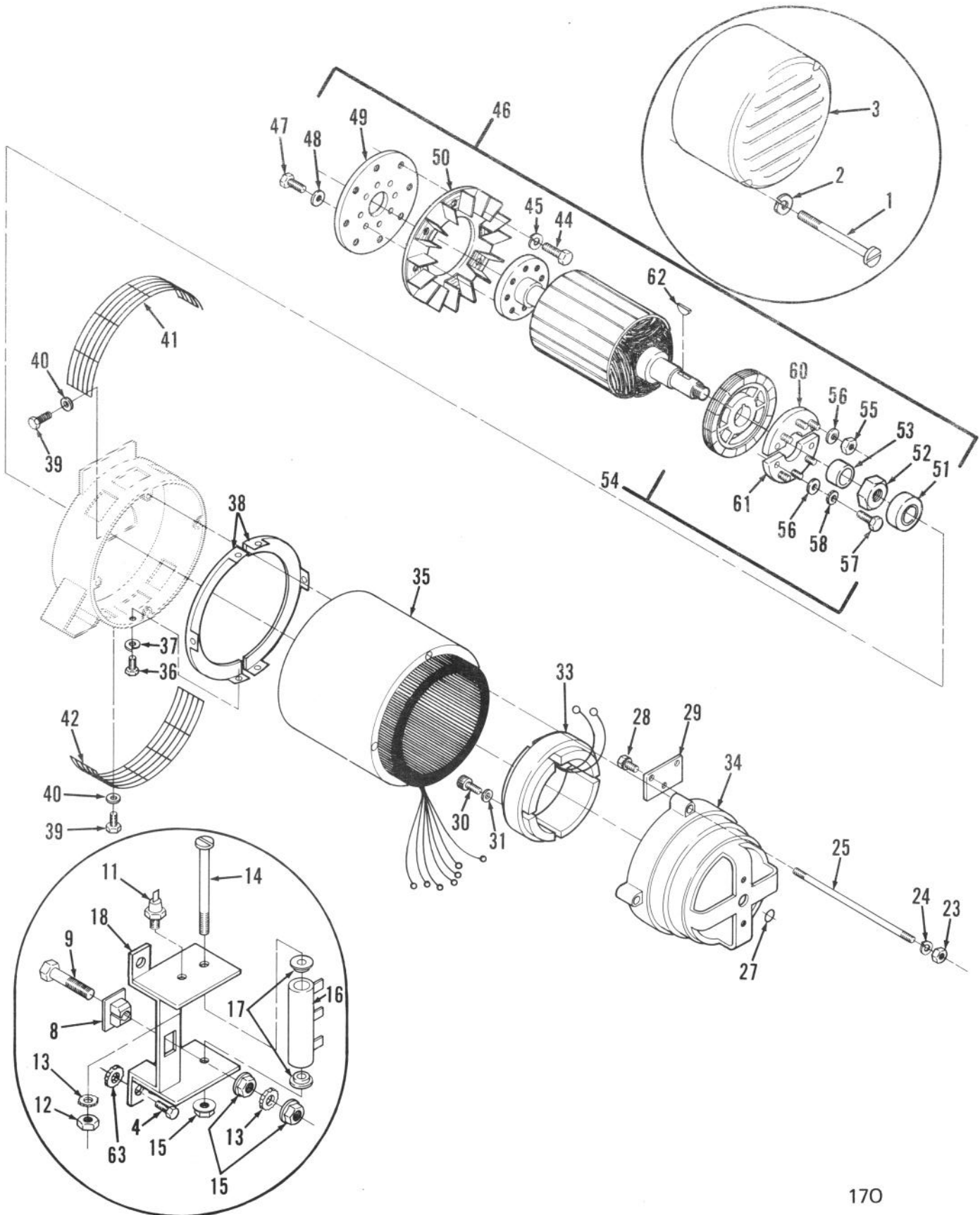


REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	304-0651	2	Resistor
2	150-1942	2	Bracket, Mounting
3	821-0004	5	Screw, Self-Locking (#10-32 x 5/16")
4	870-0131	5	Nut, Self-Locking (#10-32)
5	812-0166	2	Screw, Machine - Round Head (1/4-20 x 5")

REF NO.	PART NO.	QTY USED	PART DESCRIPTION
6	870-0212	2	Nut, Self-Locking (1/4-20)
7	304-0006	4	Washer, Centering
8	338-2246	1	Package, Wiring (Resistor Leads)
9	718-1017	4	Screw, Cap - Hex Head (M6 x 70mm)
10	850-2006	4	Washer, Lock - Spring (M6)



# Generator

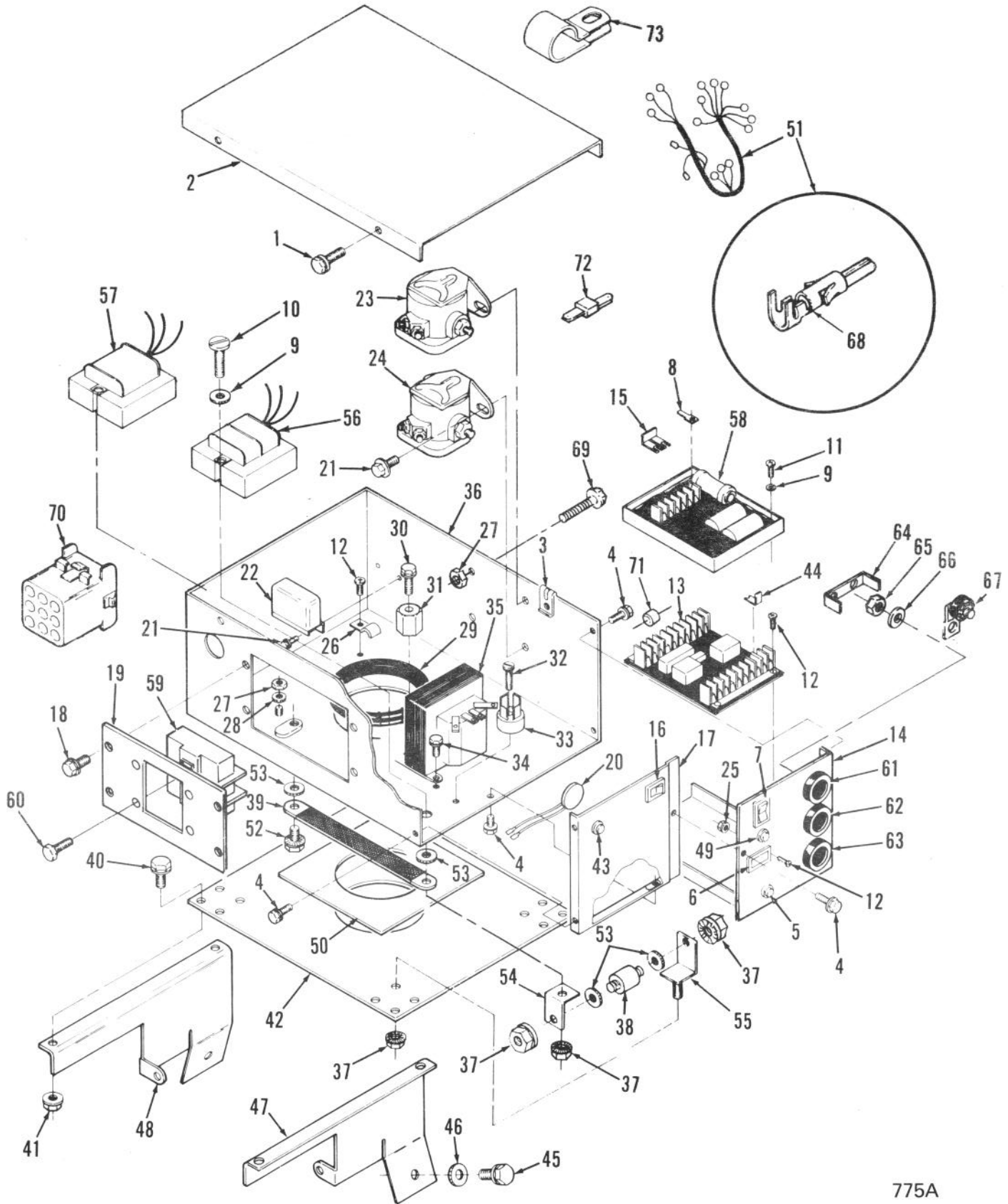


# Generator

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	812-0167	2	Screw, Machine - Round Head (1/4-20 x 6")	36	800-2034	6	Screw, Cap - Hex Head (M6 x 20mm)
2	850-0040	2	Washer, Lock - Spring (1/4")	37	850-2006	6	Washer, Lock - Spring (M6)
3	234-0498	1	Cover, Bell - End	38	234-0688	2	Baffle, Air
4	821-0010	2	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")	39	800-2029	8	Screw, Cap - Hex Head (M6 x 12mm)
8	870-0250	1	Nut, Insulating	40	526-2080	8	Washer, Flat (M6)
9	150-0723	1	Point, Contact	41	234-0689	1	Guard, Fan - Upper
11	358-0012	1	Diode, Rectifier	42	234-0770	1	Guard, Fan - Lower
12	868-0001	1	Nut, Hex - Jam (1/4-28)	44	800-2085	8	Bolt, Hex Head (M10 x 1.5 x 20mm)
13	853-0013	2	Washer, Lock - ET (1/4")	45	850-2010	8	Washer, Lock - Spring (M10)
14	812-0166	1	Screw, Machine - Round Head (1/4-20 x 5")	46			Rotor Assembly, Generator (Includes Parts Marked *)
15	870-0212	3	Nut, Self-Locking - Hex Washer Head (1/4-20)		201-3374	1	Standard
16			Resistor		201-3058	1	Extended Stack
	304-0649	1	12 Volt DC Sets	47	805-0025	8	*Bolt, Hex Head - Slotted, Grade 8 (7/16-14 x 3/4")
	304-0650	1	24 Volt DC Sets				
17	304-0006	2	#Washer, Centering	48	526-0249	8	*Washer, Flat - Hardened (15/32" ID x 1" OD x 1/8" Thk)
18	150-1938	1	#Bracket, Point and Resistor Mounting				
23	862-0003	4	Nut, Hex (3/8-16)	49	232-2921	1	*Disk, Drive
24	850-0050	4	Washer, Lock - Spring (3/8") Stud	50	205-0145	1	*Fan, Generator
25				51	510-0112	1	*Bearing, Ball
	520-0798	4	3/8-16 x 10-3/8"	52	870-0284	1	*Nut, Hex - Self-locking (1-1/8-12)
	520-0799	4	3/8-16 x 11-1/8"				
27	509-0094	1	Seal, O-Ring	53	232-2398	1	*Spacer, Bearing
28	815-0194	2	Screw, Tapping - Hex Head With ET Lockwasher (#10-32 x 3/8")	54			*Rotor Assembly, Exciter (Includes Parts Marked †)
29	232-2418	1	Board, Terminal		201-2151	1	Standard
30			Screw, Cap - Socket Head		201-2152	1	Extended Stack
	802-0038	4	1/4-20 x 1-1/2" - Standard Exciter Stator	55	870-0131	8	†Nut, Self-locking - Hex With ET Lockwasher (#10-32)
	802-0040	4	1/4-20 x 2" - Extended Stack Exciter Stator	56	526-0008	12	†Washer, Flat (13/64" ID x 7/16" OD x 1/32" Thk)
31	850-0040	4	Washer, Lock - ET (1/4")	57	813-0100	4	†Screw, Machine - Round Head (#10-32 x 1/2")
33			Stator, Exciter	58	853-0008	4	†Washer, Lock - ET (#10)
	220-2009	1	Standard	60	358-0069	1	†Rectifier Assembly - Positive
	220-2010	1	Extended Stack	61	358-0070	1	†Rectifier Assembly - Negative
34	211-0256	1	Bell, End	62	515-0094	1	*Key, Woodruff (#6)
35			Stator, Generator	63	856-0006	2	Washer, Lock - EIT (1/4")
	220-2026	1	10.0MDL3 - 50 Hertz - Code P, 53CR - 12 Volt DC 12.0MDL3 50 Hertz Code P, 53CR				
	220-2026	1	12 Volt DC				
	220-2208	1	24 Volt DC Code Z, 518R				
			12 Volt DC				
	220-3874	1	Standard				
	220-3800	1	Extended Stack				
	220-3875	1	24 Volt DC				
	220-4106	1	60 Hertz - Code J, 3CR - 12 Volt DC 12.5MDL3 - 60 Hertz				
	220-4106	1	Code A, 1R - 12 Volt DC				
	220-4106	1	Code J, 3CR - 12 Volt DC				
	220-3873	1	Code L, 18R - 12 Volt DC 15.0MDL3 - 60 Hertz				
			Code J, 3CR				
	220-4106	1	12 Volt DC				
	220-4108	1	24 Volt DC				
	220-3873	1	Code L, 18R - 12 Volt DC				

\* - Parts Included in Generator Rotor Assemblies.  
† - Parts Included in Exciter Rotor Assemblies.

# Control

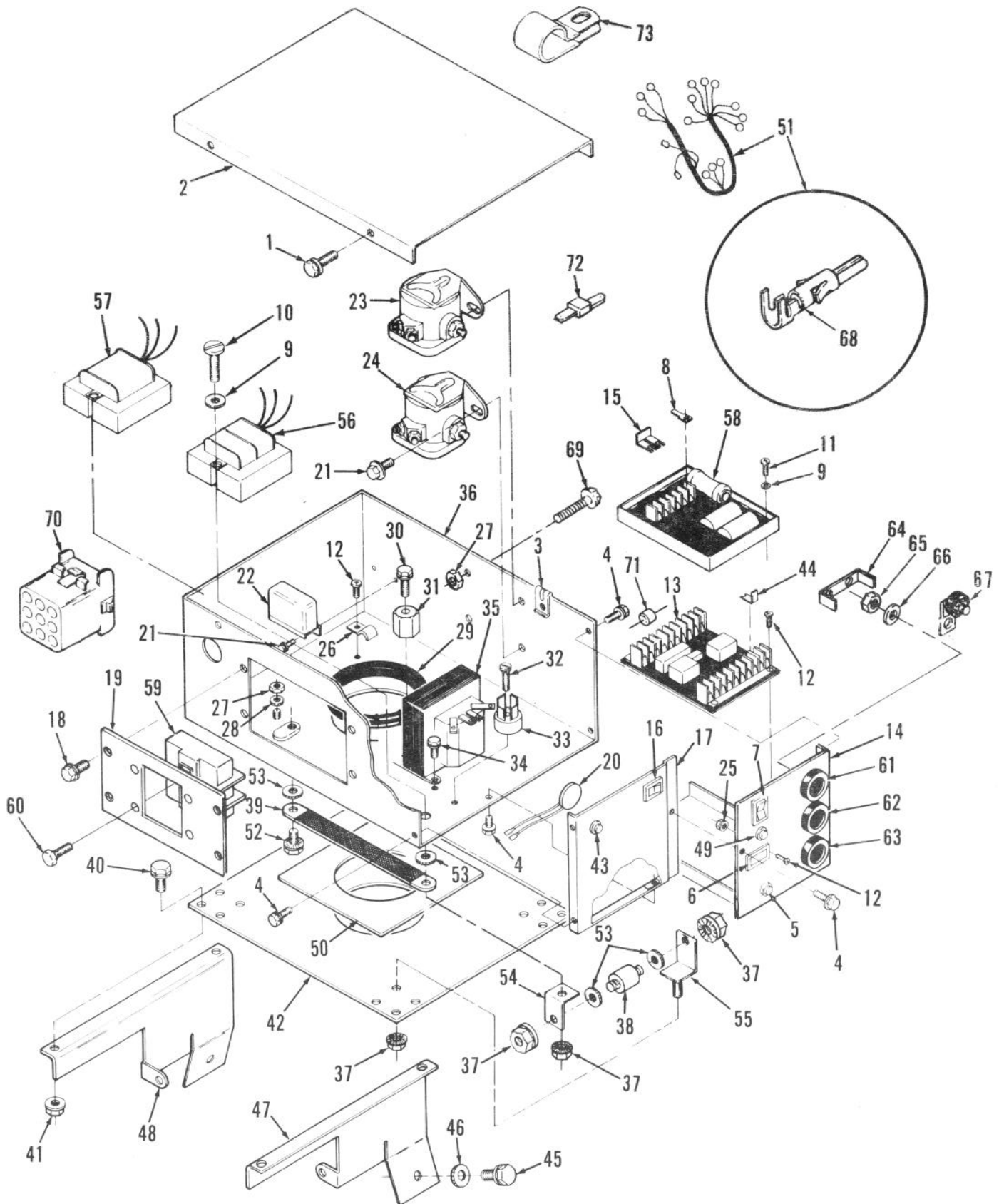


775A

# Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	821-0005	4	Screw, Self-locking - Hex Washer Head (#10-32 x 1/2")	24			Relay, Start Solenoid - Heater (K13)
2	301-7983	1	Cover, Control		307-1031	1	12 Volt DC
3	870-0398	4	Nut, Retaining (#10-32)		307-2167	1	24 Volt DC
4	821-0004	5	Screw, Self-locking - Hex Washer Head (#10-32 x 5/16")	25	870-0183	2	Nut, Hex - with ET Lock Washer (#6-32)
5	320-1139	1	Breaker, Circuit (CB12)	26	518-0437	1	Clip, Holddown
6	302-0885	1	Meter, Totalizing - Time (M11)	27	871-0016	4	Nut, Hex - Brass (1/4-20)
7	308-0739	1	Switch, Rocker (S11)	28	853-0013	2	Washer, Lock - ET (1/4")
8	332-2617	2	Terminal, Tab	29	508-0115	1	Grommet - 2-1/2" Hole
9	853-0003	8	Washer, Lock - ET (#6)	30	821-0004	4	Screw, Self-Locking - Hex Washer Head (1/4-20 x 5/16")
10	812-0071	4	Screw, Machine - Round Head (#6-32 x 1-1/2")	31	332-2370	2	Standoff, Insulator (TB1, TB2)
11	812-0070	4	Screw, Machine - Round Head (#6-32 x 1-1/4")	32	815-0346	1	Screw, Machine - Round Head - Brass with ET Lockwasher (#10-32 x 5/8")
12	815-0544	7	Screw, Machine - Round Head, Cross Recessed with IT Lockwasher	33	305-0696	1	Bridge, Rectifier (CR21)
13			Monitor, Engine (A11)	34	821-0004	4	Screw, Self-locking - Hex Washer Head (#10-32 x 5/16")
	300-2604	1	12 Volt DC	35	315-0553	1	Transformer, Voltage Regulating (T21) 60 Hertz Sets
	300-2605	1	24 Volt DC				
14			Face, Control - with Tray	36	301-7807	1	Box, Control
	301-9491	1	Controls Without DC Gauges	37	870-0257	9	Nut, Locking Head - Flange (5/16-18)
	301-9492	1	Controls With DC Gauges				
15	332-2605	1	Jumper	38	402-0633	4	Dampener, Vibration
16	320-1140	1	Breaker, Circuit (CB11)	39	337-0049	1	Strap, Ground - Control
17			Face, Control	40	821-0010	4	Screw, Self-locking - Hex Washer Head (1/4-20 x 1/2")
	301-7694	1	50 Hertz Sets	41	870-0212	4	Nut, Self-locking - Hex Washer Head (1/4-20)
	301-7951	1	60 Hertz Sets	42	301-7685	1	Plate, Mounting - Control
18	821-0004	4	Screw, Self-locking - Hex Washer Head (#10-32 x 5/16")	43	320-1121	1	Breaker, Circuit (CB21) 50 Hertz Sets
19			Plate, Cover - Access	44	332-1564	2	Terminal, Tab
	301-7684	1	Controls Without Breakers	45	815-0236	2	Screw, Tapping - Hex Head (5/16-18 x 5/8")
	301-7944	1	Controls With Two-Pole Breakers	46	856-1008	2	Washer, Lock - EIT (5/16")
20	305-0703	1	Suppressor, Voltage (RV21) 60 Hertz Sets	47	301-7700	1	Bracket, Mounting - Right Hand
21	821-0008	6	Screw, Cap - Hex Washer Head (1/4-20 x 5/16")	48	301-7699	1	Bracket, Mounting - Left Hand
22			Regulator, Voltage (K16)	49	320-0548	1	Breaker, Circuit (CB13)
	305-0383	1	12 Volt DC	50	405-3156	2	Insulation
	305-0700	1	24 Volt DC				
23			Relay, Start Solenoid - Pilot (K11)				
	307-1166	1	12 Volt DC				
	307-2169	1	24 Volt DC				

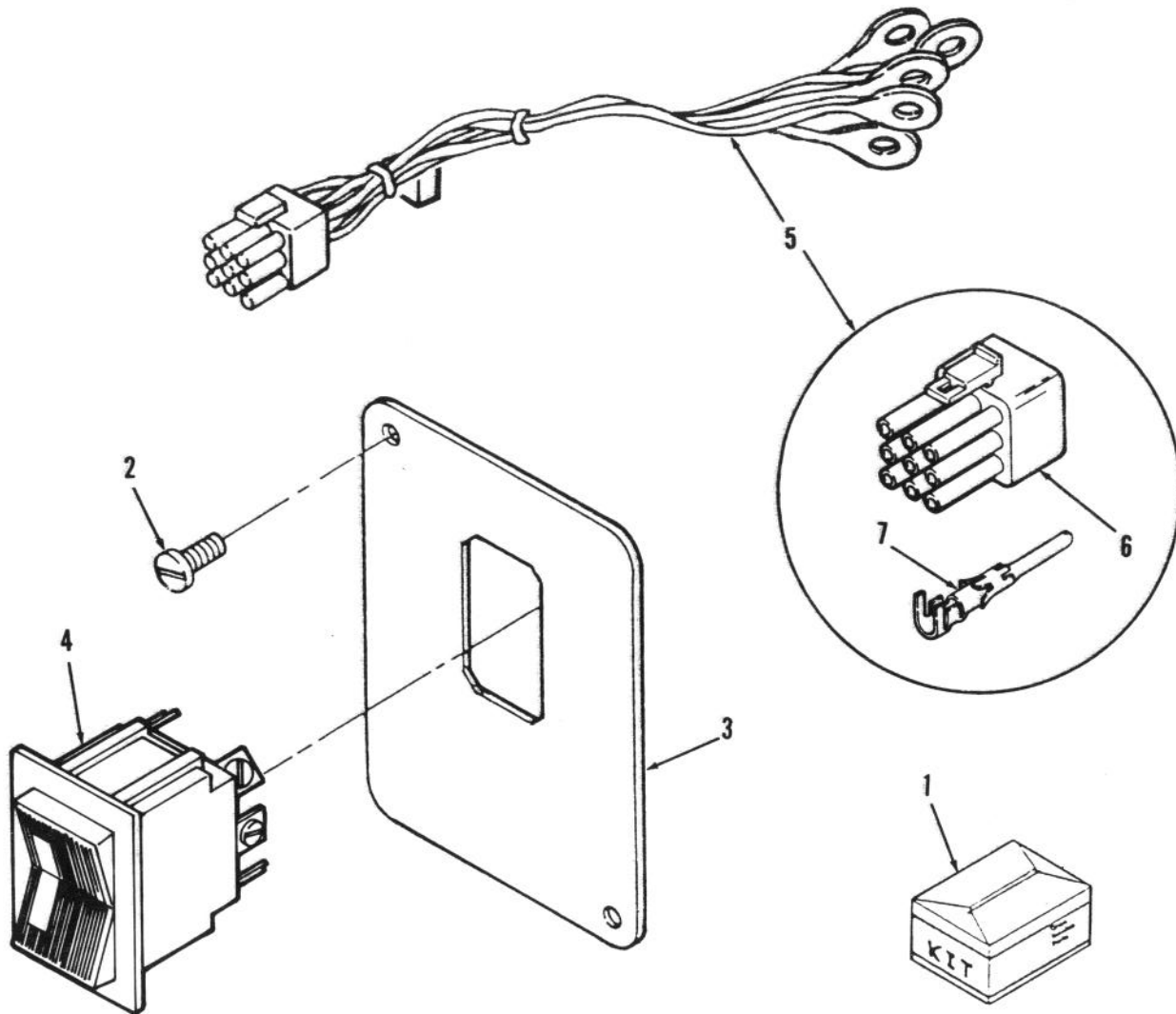
# Control



# Control

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
51			Harness, Wiring	60	812-0063	6	Screw, Machine - Round Head (#6-32 x 1/2")
			Control Box				
	338-1949-02	1	Controls Without DC Gauges	61	193-0352	1	Gauge, Pressure - Oil (M12)
	338-2363-02	1	Sets Without Preheat	62	193-0351	1	Gauge, Temperature - Coolant (M13)
			Sets With Preheat				
			(Includes Parts Marked *)	63			Voltmeter (M14)
			Controls With DC Gauges		302-1641	1	12 Volt DC
	338-1949-03	1	Sets Without Preheat		302-1642	1	24 Volt DC
	338-2363-03	1	Sets With Preheat	64	302-0270	3	Clamp, Mounting - Gauge
			(Includes Parts Marked *)	65	871-0010	9	Nut, Hex - Brass (#10-32)
			Engine to Control	66	526-0049	9	Washer, Flat (#10)
	338-1955-02	1	Controls Without DC Gauges	67	193-0250	2	Resistor, Gauge (24 Volt DC
	338-1955-03	1	Controls With DC Gauges				Oil Pressure and Coolant
	338-1678	1	Rectifier Bridge to Exciter				Temperature Gauges)
			Field and Transformer -	68	323-1200	6	*Socket, Contact
			60 Hertz Sets	69	821-0012	2	Screw, Self-Locking - Hex
	338-1679	1	Voltage Regulator Assembly				Flange Head (1/4-20 x 1-1/8")
			to Circuit Breaker, Engine	70	323-1325	1	Cap, Connector - 9 Place -
			Monitor and Exciter Field				Control Box Wiring Harness -
			- 50 Hertz Sets				Sets With Preheat (J3)
52	821-0014	1	Screw, Locking Head - Flange	71	357-0050	1	Rectifier - Sets With Preheat
			(5/16-18 x 1/2")				(CR2)
53	856-0008	10	Washer, Lock - EIT (5/16")	72	357-0030	1	Rectifier - Sets With Preheat
54	301-9544	4	Bracket, Dampener				(CR3)
55	301-8955	4	Bracket, Dampener (With Stud)	73	332-2634	3	Clamp, Loop - Insulated
56	315-0391	1	Reactor (L21) 50 Hertz Sets				(Wiring Harness)
57	315-0386	1	Transformer, Voltage (T21)				
			50 Hertz Sets				
58	305-0688	1	Regulator, Voltage - Switching	* - Parts Included in 338-2363-02 and -03 Wiring Harnesses.			
			(VR21) 50 Hertz Sets				
59			Breaker, Circuit (CB22)				
	320-1568-08	1	10.0MDL3				
	320-1568-09	1	12.0MDL3				
			12.5MDL3				
	320-1570-07	1	120 Volt Sets				
	320-1568-09	1	120/240 Volt Sets				
	320-1423	1	15.0MDL3				

# Standard Remote Control Panel Kit



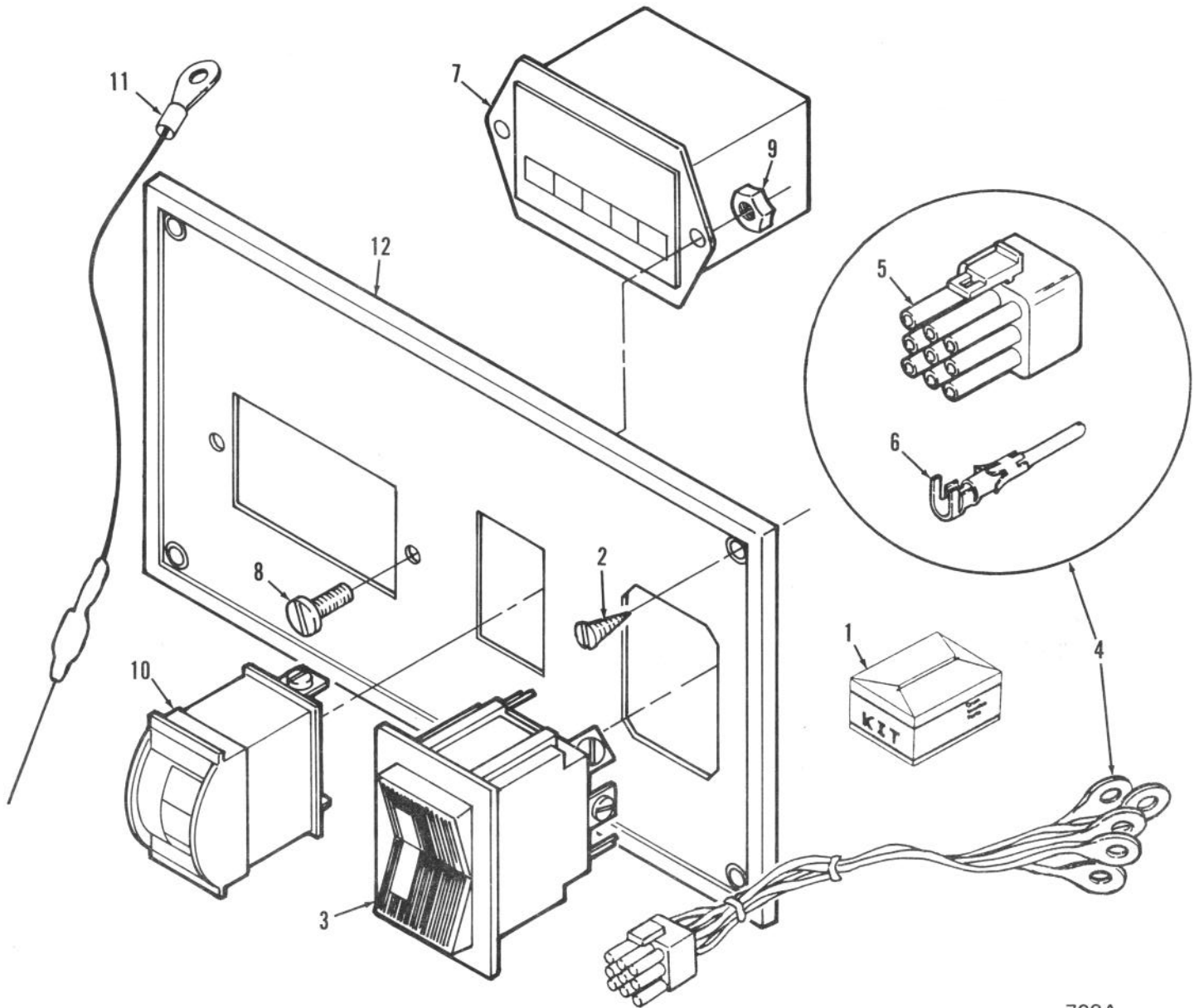
759A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	-	1	Kit, Panel - Remote Control - Standard (With Provision for Preheat) (Includes Parts Marked *) (Part number not available at time of printing)	5	338-2362-01	1	*Harness, Wiring (6") (Includes Parts Marked #)
2	808-0023	2	*Screw, Sheet Metal - Round Head (#8 x 1/2")	6	323-1291	1	#Housing, Connector (9 Place) (P4)
3	319-0491	1	*Panel (Without Decals)	7	323-1199	5	#Pin, Contact
	98-5948	1	* Decal - Front				
	98-5945	1	* Decal - Rear				
4	308-0827	1	*Switch, Rocker (S11)				

\* - Parts Included in - Remote Control Panel Kit.  
 # - Parts Included in 338-2362-01 Wiring Harness.



# Deluxe Remote Control Panel Kit

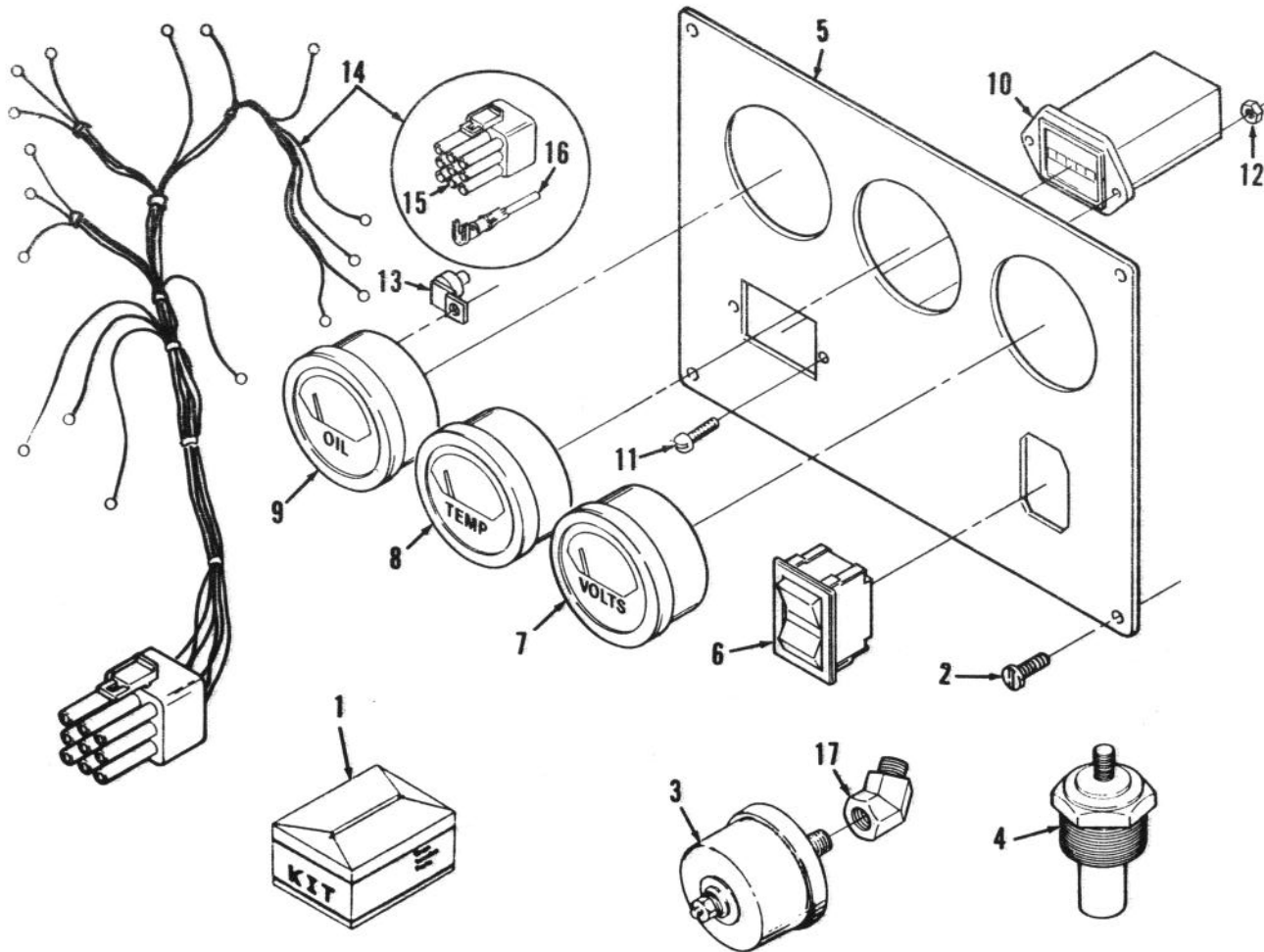


760A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1	-	1	Kit, Panel - Remote Control - Deluxe (With Provision for Preheat) (Includes Parts Marked *) (Part number not available at time of printing)	8	815-0385	2	*Screw, Machine - Round Head (#6-32 x 1/2")
2	808-0023	4	*Screw, Sheet Metal - Round Head (#8 x 1/2")	9	870-0183	2	*Nut, Hex - With ET (#6-32)
3	308-0827	1	*Switch, Rocker	10	302-0888	1	*Meter, Battery Condition
4	338-2362-01	1	*Harness, Wiring (6") (Includes Parts Marked #)	11	359-0034	1	*Diode
5	323-1291	1	#Housing, Connector (9 Place) (P4)	12	319-0492	1	*Panel (Without Decals)
6	323-1199	5	#Pin, Contact		98-5947	1	* Decal - Front
7	302-0885	1	*Meter, Time Totalizing (M11)		98-5944	1	* Decal - Rear
				* - Parts Included in - Remote Control Panel Kit.			
				# - Parts Included in 338-2362-01 Wiring Harness.			



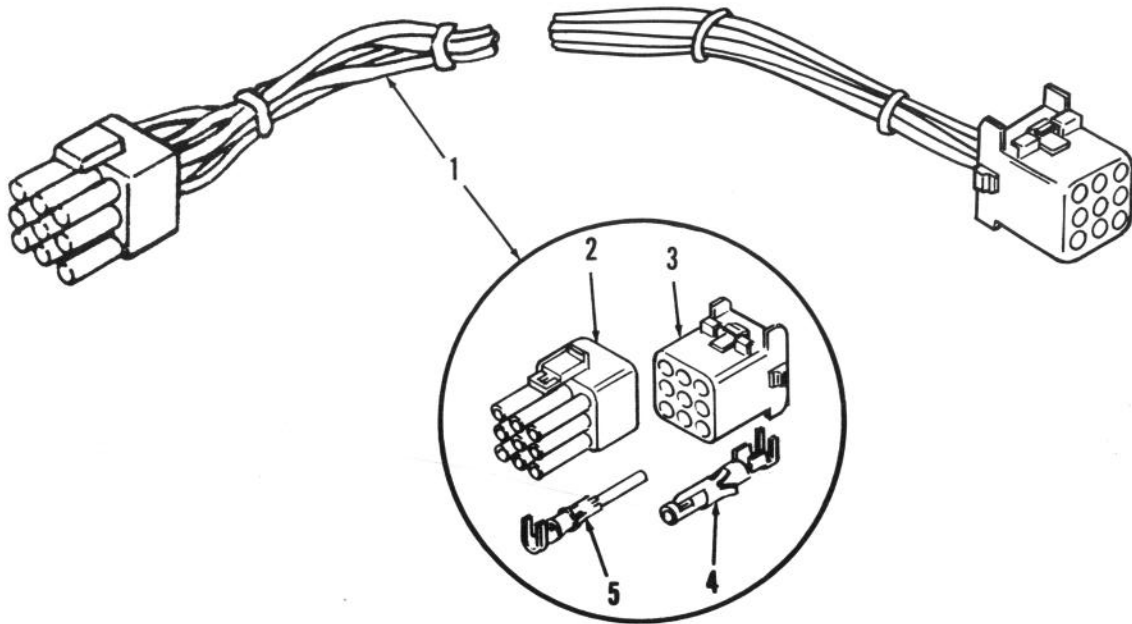
# Remote Control DC Gauge Panel Kit



761A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Kit, Gauge Panel - Remote Control (Includes Parts Listed Below)	9	193-0352	1	Gauge, Oil Pressure (Includes Mounting Hardware) (M12)
	300-3262	1	12 Volt DC	10	302-0885	1	Meter, Time Totalizing (M11)
	300-3263	1	24 Volt DC	11	815-0385	2	Screw, Machine - Round Head (#6-32 x 1/2")
2	808-0023	4	Screw, Sheet Metal - Round Head (#8 x 1/2")	12	870-0183	2	Nut, Hex - With ET (#6-32)
3	193-0244	1	Sender, Oil Pressure (E1)	13	193-0250	2	Resistor (Mounted on water temperature and oil pressure gauges with 24 Volt DC application) (R11,R12)
4	193-0318	1	Sender, Water Temperature (E2)	14	338-2222-01	1	Harness, Wiring - Control Panel (Includes Housing and Pins)
5	319-0141	1	Panel (Without Decals)	15	323-1291	1	Housing, Connector (P4)
	98-5803	1	Decal - Front	16	323-1199	7	Pin, Contact
	98-5761	1	Decal - Rear	17	502-0053	1	Elbow, Street - 45°
6	308-0827	1	Switch, Rocker (S11)				
7			Voltmeter (Includes Mounting Hardware) (M14)				
	302-1641	1	12 Volt DC				
	302-1642	1	24 Volt DC				
8	193-0351	1	Gauge, Coolant Temperature (Includes Mounting Hardware) (M13)				

**Remote Wiring Harness  
(Generator Set to Remote Control)**



762A

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
1			Harness, Wiring - Remote Control (Includes Parts Listed Below)	2	323-1291	1	Housing, Connector
	338-2237	1	15' Long	3	323-1325	1	Housing, Connector
	338-2238	1	25' Long	4	323-1200	8	Socket, Contact
	338-2354	1	45' Long	5	323-1199	8	Pin, Contact

# **Paint, Thread Sealant and Miscellaneous Kits**

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
525-0529	-	-	Paint, Touch Up (White Enamel 13 oz. Pressurized Spray Can)	509-0265	1	1	Seal, O-Ring - Injection Pump
518-0452	1	1	Sealant, Thread (50 cc Bottle)	121-0039	1	*	Gasket, PTO
			Kit, DC Gauge - Generator Set	509-0175	1	*	Seal, O-Ring - PTO
			Control (Field Installation Kit)	101-0711	1	*	Gasket, Bearing Support
300-3006	1	1	12 Volt DC	103-0723	1	*	Gasket, Gearcase
300-3007	1	1	24 Volt DC	168-0177	1	1	Kit, Gasket - Valve Grind (Includes Indented Parts Listed Below)
168-0176	1	1	Kit, Gasket - Lower End (Includes Indented Parts Listed Below)	110-3220	1	1	Gasket, Cylinder Head
101-0600	1	1	Gasket, Rear Seal Plate	110-3228	6	6	Seal, Valve Stem
102-0973	1	1	Gasket, Oil Cooler Plate	115-0232	3	3	Gasket, Rocker Cover Nut
102-0975	1	1	Gasket, Oil Cooler Cover	115-0309	1	1	Gasket, Rocker Cover
102-1128	1	1	Gasket, Oil Pan	131-0294	2	2	Gasket, Water Pump Mounting
102-1147	1	1	Gasket, Drain Plug (18mm)	154-2162	3	3	Gasket, Exhaust Manifold
103-0733	1	1	Gasket, Backplate	154-2385	1	1	Gasket, Intake Manifold
103-0731	1	*	Gasket, Gearcase	154-2325	1	*	Gasket, Exhaust Manifold
120-0917	1	1	Gasket, Oil Pickup	509-0264	1	1	Seal, O-Ring (Water Pump)
122-0635	1	1	Gasket, Oil Filter Adapter	147-0436	3	3	Seal, Injector
509-0171	1	1	Sleeve, Wear	155-1920	1	*	Gasket, Exhaust
149-1728	1	1	Gasket, Fuel Pump	309-0417	1	1	Gasket, Thermostat
509-0170	1	1	Seal, Gearcase	131-0335	1	*	Gasket, Water Pump
509-0142	1	1	Seal, O-Ring - Side Oil Fill	123-1518	1	1	Gasket, Oil Fill Cap
509-0203	1	1	Seal, Rear	131-0334	1	*	Gasket, Water Pump
509-0263	1	1	Seal, O-Ring - Injection Pump Cover	131-0408	1	*	Gasket, Water Pump
				131-0409	1	*	Gasket, Water Pump

\* - Not used in all applications.

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